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TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1936

No. 35

SAMUEL B. SMITH, PETITIONER,

vs.

A. B. HALL AND L. C. HALL, D. B. A. HALL BROTHERS

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

PETITION FOR CERTIORARI FILED APRIL 21, 1936.

CERTIORARI GRANTED MAY 25, 1936.

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1936.

No. 35.

SAMUEL B. SMITH, PETITIONER,

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A. B. HALL AND L. C. HALL, D. B. A. HALL BROTHERS

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

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JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., JULY 14, 1936.

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[fol. 1]

IN UNITED STATES DISTRICT COURT, DISTRICT OF CONNECTICUT

Equity. No. 2369

SAMUEL B. SMITH

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS.

DOCKET ENTRIES

1934.

July 18. Bill of complaint alleging infringement of Letters Patent No. 1,262,860 filed.

" 18. Subpoena issued and with two copies of bill of complaint handed to the Marshal for service.

" 18. Report to commissioner of patents.

" 20. Subpoena returned showing service.

Aug. 8. Answer of defendants filed and copy sent to Rockwell & Bartholow, Attorneys for plaintiff.

1935.

Jan. 23. Order and motion for preliminary injunction filed and entered and with two copies of same handed to the marshall for service.

" 29. Order and motion for preliminary injunction returned showing service.

Feb. 18. Defendant's joinder of issue on motion of Plaintiff and order thereon for preliminary injunction vs. Defendants filed. Copies of briefs received and filed.

" 25. Brief for plaintiff upon motion for preliminary injunction filed and handed to Judge Hincks, with affidavit of Joseph I. Taggert.

[fol. 2]

Feb. 27. Hearing had re. preliminary injunction. Two witnesses were sworn and testified on behalf of defendants. Exhibits A and B were filed by defendants. Exhibits C, D, and E were marked for identification. One witness was sworn and testified for plaintiff. Witness Taggert was recalled.

DOCKET ENTRIES—Continued

1935.

Feb. 27. Arguments were heard and memorandum was filed by Attorney for defendant. The Court ordered orally that injunction issue forthwith and scope or decree to be agreed upon by counsel and submitted. Supersedeas bond of $25,000.00 to be filed by defendant on or before March 4, 1935.

" 28. Findings of fact filed.

" 28. Decree filed and entered. (Hincks, J.)

" 28. Injunction issued and with two certified copies of same handed to the Marshal for service.

Mar. 5. Injunction returned showing service.

" 2. Injunction bond in the sum of $25,000.00 filed.

" 26. Transcript of testimony filed.

Apr. 4. Motion of George D. Seymour for disappearance and order allowing same filed and entered. (Hincks, J.)

May 6. Motion to amend defendants' answer filed.

" 6. Amended answer of defendants filed.

" 8. Specification under Rule 1 filed.

" 13. Order granting motion to amend answer filed and entered. (Hincks, J.)

" 31. Stipulation filed.

June 5. Stipulation regarding taking testimony filed.

[fol. 3]

June 10. Request for subpoena filed and subpoena issued.

" 10. Defendants' motion for leave to take deposition of Reese V. Hicks and affidavit of Arthur E. Paige filed.

" 13. Memorandum of decision and order on defendants' motion for leave to take the deposition of Reese V. Hicks, filed and entered. (Hincks, J.) Copies mailed to attorneys of record.

" 17. Subpoena for A. B. Hall returned showing service.

" 17. Hearing had on motion for preliminary injunction. One witness was sworn and testified on behalf of plaintiff. Plaintiff's exhibits 18 to 32, inclusive, were filed. One witness was sworn and testified for the plaintiff. Four witnesses

1935.

were sworn and testified for the defendants. Witness Hastings was recalled. Defendants' exhibits F and G were filed. Defendant rests. Arguments were heard. Briefs to be filed and reply briefs if desired.

July 1. Brief on behalf of plaintiff filed and handed to Judge Hincks. Copy of same mailed to Arthur E. Paige, Esq.

" 1. Brief for defendants filed and handed to Judge Hincks.

" 1. Exhibits H and I were filed and handed to Judge Hincks.

" 4. Corrections of report of the trial proceedings, etc., filed.

" 8. Supplemental brief for defendants filed and handed to Judge Hincks.

" 8. Reply brief on behalf of plaintiff filed and handed to Judge Hincks.

[fol. 4]

July 11. Corrections of report of the Trial Proceedings, etc., filed.

" 15. Letter from Arthur E. Paige, dated July 13, 1935, showing acceptance of some corrections of report of trial proceedings, etc., and excepting others, filed.

" 18. Opinion filed. (Hincks, J.)

" 27. Exceptions by plaintiff filed (re paragraph 7 of finding of fact).

Aug. 12. Decree filed and entered and Attorney Arthur E. Paige notified. (Hincks, J.)

" 14. Petition for appeal filed.

" 14. Assignment of errors filed.

" 14. Statement of testimony under Rule 75b filed.

" 14. Bond on appeal filed.

" 14. Praecipe filed.

" 15. Order allowing appeal filed and entered. (Hincks, J.)

" 15. Notice filed.

DOCKET ENTRIES—Continued

1935.

Aug. 15. Citation issued returnable thirty days from August 14, 1935, and with a copy of same mailed to Rockwell & Bartholow.

" 17. Citation returned showing service.

Sept. 4. Stipulation re. item 13 of praecipe filed.

" 4. Stipulation and statement of testimony under Rule 75b and certificate thereon by Judge Hincks filed and entered.

" 12. Order extending time for appeal papers filed and entered. (Hincks, J.)

" 12. Order for removal of exhibits filed and entered. (Hincks, J.)

[fol. 5] IN UNITED STATES DISTRICT COURT, DISTRICT OF CONNECTICUT

In Equity. No. 2369

SAMUEL B. SMITH, Plaintiff,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS, Defendants

BILL OF COMPLAINT

To the Honorable the Judges of the United States District Court for the District of Connecticut:

Plaintiff, for his bill of complaint, represents and states as follows:

I

That the plaintiff, Samuel B. Smith, is a citizen of the United States and a resident of Cleveland, Ohio.

II

Upon information and belief that the defendants, A. B. Hall and L. C. Hall, are residents of the City of Wallingford, New Haven County, within the District of Connecticut, at which place they are engaged in and doing business in the hatching of eggs under the name and style of Hall [fol. 6] Brothers, and wherein the acts of infringement hereinafter complained of were and are being committed.

III

That the jurisdiction of this court depends upon the fact that this is a suit in equity arising under and based upon the patent laws of the United States.

IV

That prior to October 26, 1916, the plaintiff, Samuel B. Smith, was the first, original and sole inventor of certain new and useful improvements in Incubators, not known or used by others before his invention or discovery thereof, not patented or described in any printed publication in this or any foreign country prior to his invention thereof or more than two years prior to October 26, 1916, not in public use or on sale in this country for more than two years prior to said date, not abandoned, and not patented by Samuel B. Smith or his legal representatives or assigns upon an application filed more than twelve months prior to said date.

V

That on October 26, 1916, the plaintiff, Samuel B. Smith, filed in the United States Patent Office an application for Letters Patent of the United States for said improvement in Incubators.

VI

That prior to April 16, 1918, Samuel B. Smith assigned the right, title and interest in and to the said invention and [fol. 7] in and to any United States patent to issue thereon to The Buckeye Incubator Company, a corporation of Ohio, and that after due proceedings upon the said application for patent there was issued to The Buckeye Incubator Company, aforesaid, United States Letters Patent No. 1,262,860 on April 16, 1918, whereby the exclusive right of making, using and selling the said invention and improvements throughout the United States for the term of said patent was granted to The Buckeye Incubator Company, aforesaid, its successors or assigns, as will more fully appear from the original or duly certified copies of the said patent and assignment to be produced in court herein.

VII

That under date of April 29, 1927, The Buckeye Incubator Company, aforesaid, being then the owner of the title in

and to the aforesaid Letters Patent, did sell, assign and transfer to the plaintiff, Samuel B. Smith, his heirs and assigns, the right, title and interest in and to the said Letters Patent as will more fully appear from the original assignment or duly certified copy thereof to be produced in court herein.

VIII

That the plaintiff and his predecessor in title, The Buckeye Incubator Company, have been at all times the sole and exclusive owners of the said patent.

IX

That the said patented invention has proven to be of very [fol. 8] great value, and the plaintiff has expended large sums of money in the manufacture and sale of incubators embodying the invention thereof. The incubators so manufactured and sold have acquired a high reputation and utility and have proven to possess superior functions and qualities over other incubators, and have been in great demand due to the new and useful invention made by the plaintiff in the art of incubating eggs.

X

That the patent in suit has been adjudicated in a large number of suits brought thereon, and has been unanimously held valid in such cases by the Circuit Courts of Appeals of the Third, Sixth, Eighth and Ninth Circuits as will more fully appear by reference to the decisions in the said Courts.

XI

That in a case decided April 9, 1934, in the Circuit Court of Appeals of the Ninth Circuit, known as Herbert H. Waxham, Appellant v. Samuel B. Smith, Appellee, the said patent was declared valid as aforesaid, and Claim 1 of the said patent held to be infringed by the incubator involved in such case, as will more fully appear from said decision which is reported in 70 F. (2d) 457; and that the incubator involved in such suit was and is known as "Robbins No. 23 Incubator."

XII

Upon information and belief, that the said defendants A. B. Hall and L. C. Hall, prior to and within six years of [fol. 9] the filing of the bill of complaint herein, were in possession of, and using in the incubating of eggs at their place of business at Wallingford, New Haven County, Connecticut, one or more Robbins Incubators, the same, or similar to that found to be an infringement of Claim 1 of said patent in the case of Waxham v. Smith referred to above, which unauthorized use constitutes an infringement of said patent No. 1,262,860, and particularly Claim 1 thereof, and are threatening to continue to use such incubator or incubators, thereby infringing upon the rights of the plaintiff as secured by said patent, all without the license or consent of plaintiff.

XIII

That incubators manufactured and sold by the plaintiff have been marked "Patented" together with the date and number of the patent aforesaid, as required by the Statutes of the United States, and that in addition the defendants herein have been duly notified in writing of the patent aforesaid and of their infringement thereof.

XIV

That by reason of the infringement complained of herein, plaintiff has suffered, and is suffering, immediate and irreparable damage and injury, and is without an adequate remedy at law, and will continue to suffer such irreparable damage and injury unless the defendants are restrained by an order of this Court from said infringing acts; that the defendants have realized profits and gains in connection with the infringing acts complained of herein, which of [fol. 10] right belong to this plaintiff and of which plaintiff prays discovery.

Wherefore the plaintiff prays:

1. That a writ of subpoena may issue out of this Court directed to the defendants, A. B. Hall and L. C. Hall, commanding them to appear and answer all and singular the matters and things herein complained of, but not under oath, an answer under oath being expressly waived.

2. That temporary and permanent injunctions be issued out of this Court addressed to the defendants, A. B. Hall and L. C. Hall, and their workmen, employees, solicitors, agents, attorneys and others claiming or holding under the defendants, enjoining and restraining them from in any manner directly or indirectly infringing upon the patent sued upon herein.

3. That the defendants be required to account for and pay to the plaintiff all the gains and profits acquired by them and recompense the plaintiff for the damages sustained by the plaintiff by reason of the infringement complained of herein.

4. That the defendants pay the costs of this suit, and that such other, further and equitable relief be granted to the plaintiff as shall be found necessary or proper.

Samuel B. Smith, by Rockwell & Bartholow, His Attorneys and Solicitors. Edmond M. Bartholow, A. C. Ely, Ely & Barrow, of Counsel.

[fol. 11] *Duly sworn to by Samuel B. Smith. Jurat omitted in printing.*

[fol. 12] IN UNITED STATES DISTRICT COURT

[Title omitted]

ANSWER

Comes now the defendants above named, and, each answering the bill of complaint of plaintiff herein, and reserving all right of exception and objection to the many uncertainties and inaccuracies in said bill of complaint, avers and says:

I

Admits that the plaintiff, Samuel B. Smith, is a citizen of the United States and a resident of Cleveland, Ohio.

II

Answering paragraph II, defendants admit that their residence and place of business is at Wallingford, Connecti-

cut, but deny that they or either of them have or has committed any act of infringement there or at all.

III

Admits that if this Court has jurisdiction, it has same because of the fact that this is a suit in equity alleged to [fol. 13] arise under and based upon the patent laws of the United States.

IV

Denies that prior to October 26, 1916, or at any time, the plaintiff, Samuel B. Smith, was the first, original and sole or any inventor of certain new or useful improvements in incubators, or that the same was not known or used by others before his pretended invention or discovery thereof, or that the same was not patented or described in any printed publication in this or any foreign country prior to his alleged invention thereof or more than two years prior to October 26, 1916, or not in public use or on sale in this country for more than two years prior to said date or not abandoned, or not patented by Samuel B. Smith or his legal representatives or assigns upon an application filed more than twelve months prior to said date.

V

Defendant further denies that on October 26, 1916, the plaintiff, Samuel B. Smith, filed in the United States Patent Office an application for letters patent of the United States for said improvement in incubators.

VI

Defendant denies that prior to April 16, 1918, or at any time, or at all, Samuel B. Smith assigned the right, title or interest in or to the said invention or in or to any United States patent to issue thereon to the Buckeye Incubator Company, a corporation of Ohio, or that after due proceedings upon the said application for patent there were issued [fol. 14] to the Buckeye Incubator Company aforesaid U. S. Letters Patent No. 1,262,860, on April 16, 1918, but admits that Letters Patent of said number and date were issued, and defendant denies that the exclusive or any right of

making, using or selling the said invention or improvements throughout the United States for the term of said patent was granted to the Buckeye Incubator Company, or its successors or assigns, or that the same more fully or at all could or would appear from the pretended original or duly certified copies of the said patent and assignment, were same to be produced in court herein; and thereunto and as to each part of the allegations of said paragraph VI of the bill of complaint other than in this paragraph admitted, defendant calls upon plaintiff for strict proof thereof.

VII

Denies that under the date of April 29, 1927, or at any time, or at all, the Buckeye Incubator Company, if it were then the owner of the title in and to the aforesaid letters patent, and which defendant denies, did sell, assign and transfer to the plaintiff, Samuel B. Smith, or his heirs or assigns, the right, title or interest in or to the said letters patent as would or could more fully or at all appear from any original assignment or duly certified copy thereof which might be produced in court herein.

VIII

Denies that plaintiff or his alleged predecessor in title, the Buckeye Incubator Company, has been at all times or at any time the sole and exclusive owner of the said patent.

[fol. 15]

IX

Denies that the said patented invention, if such there be, has proven to be of very great or any value; or that plaintiff has expended large sums of money in the manufacture and sale of incubators embodying the invention thereof; or that the incubators so manufactured or sold have acquired a high reputation or utility or have proven to possess superior functions or qualities over other incubators, and alleges upon the contrary that the incubators as manufactured and sold by plaintiff have proven to be inferior to other incubators; and denies that the said patent has been widely recognized or respected, but on the contrary alleges and avers that the said patent has been very uniformly ignored and but rarely recognized or respected, and that the courts have repeatedly found the same not to be

infringed in actions for infringement instituted under said patent; and defendant admits that said patent was held valid and infringed by the Circuit Court of Appeals for the Ninth Circuit in the case of Robert (Herbert) H. Waxham, Appellant vs. Samuel B. Smith, et al., Appellees, No. 7154, in a decision dated April 9, 1934, as will more fully and at large appear by reference to said decision, but defendant avers and alleges that three days thereafter, to wit, April 12, 1934, said patent was held not infringed by the Circuit Court of Appeals of the Eighth Circuit in the case of E. H. Snow and E. H. Snow doing business as Snow's Hatcheries and Snow Incubator Company, Appellant vs. Samuel B. Smith, Appellee, No. 9757, as will more fully and at large appear by reference to said decision, and has also been [fol. 16] repeatedly held not infringed in various decisions in the Third and Sixth Judicial Circuits, as will more fully and at large appear by reference to said decisions, and as to which plaintiff is fully advised; and defendant further alleges and avers that a petition for certiorari in said case No. 7154 (Waxham, Appellant vs. Smith, et al., Appellees) was duly filed in the Supreme Court of the United States on or about July 23rd, 1934, and is now pending in said Court.

X

Defendant is not informed, save by the bill of complaint, as to the allegations of paragraph XIII thereof, as to the marking of incubators manufactured or sold by plaintiff, and, therefore, denies same, but admits that defendant has been notified in writing of the patent aforesaid and of its alleged infringement thereof.

XI

Defendant denies that defendant, prior to or within six years of the filing of the bill of complaint or at any time or in any manner, was in the possession of or was using in the hatching of eggs, at a place of business in Fontana, California, or elsewhere, incubators embodying or operating in accordance with the pretended invention of said patent No. 1,262,860, or particularly claim 1 thereof, or any claim thereof, or is threatening to continue use of such incubator or incubators, or that any such use of such incubator or incubators did or could or can infringe upon the pretended

[fol. 17] rights of the plaintiff as secured by said patent or alleged to be secured thereby, or that the same was without the license or consent of the plaintiff; and on the contrary, defendant specifically alleges that such incubator or incubators as it had in its possession or was using was in all respects and particulars totally different and distinct in construction and mode of operation and method of use from any incubator disclosed or described or claimed in said pretended letters patent No. 1,262,860, and operated in part or in whole, rather, in accordance with the description and disclosure and claims of Reissue Letters Patent No. 18,984, dated October [redacted] 1933, granted to John L. Robbins, of Edgewater, Colorado, for Incubator, upon surrender of original Letters Patent No. 1,728,980, dated September 24, 1929, and of said original letters patent, and which said reissue letters patent and original letters patent teach and claim an entirely different invention and construction and mode of operation or method of use than that purported to be set forth and claimed in said patent No. 1,262,860, and which separate invention was discovered and produced by said John L. Robbins long after the issuance of said patent No. 1,262,860, and entirely independently of the teaching of the latter, and is in no way servient thereto; whereby defendant is partially or entirely justified under said Robbins reissue patent.

XII

Defendant denies that by reason of the pretended infringement complained of in the bill of complaint, plaintiff [fol. 18] has suffered or could suffer or is suffering immediate or irreparable or any damage or injury or is without an adequate remedy at law, or will continue to suffer any irreparable or any damage or injury unless the defendant be restrained by an order of this court from said alleged infringing acts, and defendant denies specifically that it has committed any infringing act or acts; and defendant denies that defendant has realized profits or gains in connection with any alleged infringing acts complained of in said bill of complaint, or which of right or at all belong to plaintiff and as to which plaintiff prays discovery, and denies the right of plaintiff to any such discovery.

XIII

As a further, additional, separate or alternative defense, defendant alleges and avers that the subject-matter of said patent No. 1,262,860 and of claim 1 and each method claim thereof consists of and constitutes the mere function, and only the function, of the apparatus or mechanism or thing disclosed and described in said patent, and that said claim 1 and each such method claim is and are, therefore, void for functionality.

XIV

As a further, additional, separate or alternative defense, defendant alleges and avers that the subject-matter of said patent No. 1,262,860, and of said claim 1 and each of the claims thereof, constitutes a mere aggregation of old steps and parts and devices, and of steps and parts and devices [fol. 19] that are not combinative in character and interrelation and nature, and that said letters patent and each claim thereof are, therefore, void for aggregation.

XV

As a further, additional, separate or alternative defense, defendant alleges and avers that the subject-matter of said patent No. 1,262,860, and each and every of the claims thereof, was not novel or patentable at the time of the alleged invention thereof by said Samuel B. Smith, as alleged in said bill of complaint; but that said letters patent No. 1,262,860, and each and every of the claims thereof, is and are invalid and void for the reason that the subject-matter and all material and substantial parts thereof had been, prior to the alleged invention or discovery thereof by Samuel B. Smith, or more than two years prior to his application for said letters patent, known, used, invented, published and shown, and publicly known, used and invented and described and published and contained in and by the following U. S. Letters Patent and publications, and invented and known and published by the patentees thereof, at the places of residence thereof as set forth in the following U. S. and foreign letters patent, and other publications and elsewhere, and at and before and after the dates of application appearing upon the following letters patent, whereby said patent No. 1,262,860 is wholly void for want of novelty or invention, to wit:

United States Patents

Number	Date	Name
3,019	March 30, 1843	N. E. Guerin
120,253	Oct. 24, 1871	H. Endemann
[fol. 20]		
152,644	June 30, 1874	E. A. and C. W. Jones
272,744	Feb. 20, 1883	A. H. Morgan
240,004	April 12, 1881	P. H. Bate
286,756	Oct. 16, 1883	C. F. Winkler
297,676	April 29, 1884	G. Conant
320,463	June 23, 1885	L. Cutting
330,457	Nov. 17, 1885	C. Bassini & A. Heyden
344,474	June 29, 1886	J. W. Campbell
559,676	May 5, 1896	T. R. C. Christianson
591,870	Oct. 19, 1897	F. H. Morgan
410,110	Aug. 27, 1889	J. H. Knowles & J. K. Proctor
432,282	July 15, 1890	J. K. Proctor & J. H. Knowles
535,175	March 5, 1895	C. W. Schwartz, Jr.
553,723	Jan. 28, 1896	J. K. Proctor
11,460	Dec. 25, 1894	Reissue patent to J. K. Proctor
691,837	Jan. 28, 1902	V. S. Bell
709,650	Sept. 23, 1902	O. P. Scott
725,079	April 14, 1903	G. C. Hawkins
745,458	Dec. 1, 1903	F. C. Perkins
828,181	Aug. 7, 1906	G. H. Boyd
798,697	Sept. 5, 1905	F. C. Perkins
886,325	April 28, 1908	E. F. Osborne
891,019	June 16, 1908	L. Verna
916,454	March 30, 1909	V. C. Koons
916,273	March 23, 1909	A. C. Coons
949,653	Feb. 15, 1910	J. H. Klinke
1,100,146	June 16, 1914	J. O. Olson
1,137,752	May 4, 1915	G. E. Goldstein
1,160,793	Nov. 16, 1915	S. S. Van Keuren
1,165,958	Dec. 28, 1915	Thos. B. Freas
1,205,445	Nov. 21, 1916	R. F. Fullington
193,616	July 31, 1877	E. S. Renwick
[fol. 21]		
217,148	Feb. 3, 1880	E. S. Renwick
271,184	Jan. 23, 1883	H. Altenbrand

United States Patents—Continued

Number	Date	Name
280,490	July 3, 1883	G. Lumpp
335,961	Feb. 9, 1886	E. S. Benwick
426,321	Apr. 22, 1890	J. K. Proctor & J. H. Knowles
456,407	July 21, 1891	F. Frey & A. M. Wayne
586,088	July 6, 1897	W. P. Jones
599,145	Feb. 15, 1898	George Kutz
614,493	Nov. 22, 1898	G. S. Newsom
789,719	May 16, 1905	J. M. Day
832,151	Oct. 2, 1906	C. S. Newsom
992,622	May 16, 1911	J. Wiebe
1,010,809	Dec. 5, 1911	J. Schmidt & H. Schutterle
1,034,205	July 30, 1912	J. C. Cogburn
1,075,747	Oct. 14, 1913	C. W. Zimmer
1,086,903	Feb. 10, 1914	A. Di Domenica and A. Amicarelli
1,158,447	Nov. 2, 1915	C. J. Coleman
1,195,705	Aug. 22, 1916	P. S. Martin
360,223	Mar. 29, 1887	E. H. Johnson
843,909	Feb. 12, 1907	F. M. Peters & H. H. Hungerford
917,483	Apr. 6, 1909	C. C. Peck
946,911	Jan. 18, 1910	G. C. Andrews

Foreign Patents

155,917	(German)	Nov. 7, 1901	E. Stulik
117,089	"	Feb. 4, 1901	Mann

Publications

A book by Milo M. Hastings (pages 104-105), entitled "The Dollar Hen", published by the Arcadia Press, N. Y., [fol. 22] 1909. A copy is in the Public Library in New York, N. Y.

An article entitled "Indoor Chicken Factories", published in the Boston Sunday Globe, of Boston, Mass., issue of November 10, 1912. A copy is in the office of the Boston Globe, at Boston, Mass.

An article entitled "Hatching Chickens by Wholesale", published in the Technical World, at Chicago, Illinois, in the issue of April, 1913, (pages 248-249). A copy is in the Public Library, New York, N. Y.

An article entitled "Incubator" appearing on pages 652-653 of Ure's Dictionary of Arts, Manufactures and Mines, published in London, England, by Longmans, Green & Co., in 1867. A copy is in the Public Library at Minneapolis, Minnesota.

An article entitled "Incubator", appearing on pages 1177 and 1178 of Knight's American Mechanical Dictionary, Vol. II, published at Boston, Mass., by Houghton, Mifflin & Company, in 1884.

An article entitled "Ventilator", appearing on pages 2704 and 2705 of Knight's American Mechanical Dictionary, Vol. III, published at Boston, Mass., by Houghton, Mifflin & Company, in 1884, and particularly the cut (Fig. 6960) appearing on page 2705, entitled "Sectional View of the Senate Wing, United States Capital, showing the Pressure and Exhaust Ventilating Apparatus"; and the description thereof, which appears on the said page directly below said cut.

And other publications, now unknown to these defendants, but which, when discovered, they pray leave to add by amendment to this, their answer in this suit.

[fol. 23] XVI

Further answering, the defendant, on information and belief, and as a separate, additional and alternative defense, avers that the said Samuel B. Smith patent in suit, 1,262,860, of April 16, 1918, alleged to be applied for October 26, 1916, is, as to the relied upon claim 1 and each method claim thereof, invalid and of no effect in law, for the reason that the alleged invention, or method of hatching eggs disclosed in said patent and pointed out in the method claims thereof, had been put into public commercial use by the said Samuel B. Smith in the United States, at Attica, Ohio, and at Cleveland, Ohio, at dates more than two years before the said Samuel B. Smith filed in the Patent Office his said application which matured into his said alleged patent here in suit, and this usage or practice of said invention was effected by said Smith at said places in incubators designed and built by him, or under his direction; and the hereinbelow named persons whose residence appear opposite their respective names, had knowledge of the said usage of said machines, at said places, to wit:

Samuel B. Smith, Cleveland, Ohio,
James W. Miller, Bucyrus, Ohio,
Albert H. Wilson, Toledo, Ohio,
Edward H. Uhle, Cleveland, Ohio,
Mr. and Mrs. Carrick, Cleveland, Ohio;

and the defendant further alleges that one or more of the said incubating machines used by said Smith at Attica, and [fol. 24] at Cleveland, Ohio, for carrying into effect his said method of hatching eggs disclosed in said patent in suit and pointed out in method claims thereof, was referred to and described in a newspaper article published in the Sunday Plain Dealer, of Cleveland, Ohio, in its issue of Sunday, February 23rd, 1913, entitled "Mammoth Incubator will turn out 20,000 Chicks per Week", and also, in an article published in the Cleveland Leader, of Cleveland, Ohio, Sunday, February 22nd, 1914, entitled "Cleveland Boasts Largest Hatchery".

XVII

Further answering, the defendant, on information and belief, avers that the said Samuel B. Smith patent in suit 1,262,860, of April 16, 1918, applied for October 26, 1916, is, as to the method claims thereof, invalid and of no effect in law for the reason that the alleged invention or method of hatching eggs disclosed in said patent and pointed out in said relied upon claims thereof, had been put into public use in the United States on Walter B. Davis' farm at Brooklyn, N. Y., and at Muskogee, Okla., and at Port O'Connor, Texas, by Milo M. Hastings, of New York City, at dates more than two years before the said Samuel B. Smith filed in the Patent Office his application which matured into said patent here in suit, and said usage of said invention was effected by said Milo M. Hastings in incubators designed and built by him or under his direction, and the hereinbelow named persons, whose residences appear opposite their respective names, had knowledge of said usage, to wit: the following three persons had knowl- [fol. 25] edge of said usage on the Walter B. Davis farm at Brooklyn, N. Y., namely:

Milo M. Hastings, White Plains Road, Tarrytown, N. Y.,
Walter B. Davis, Jersey City, N. J.,
Edgar Chambless, 122 East 34 St., New York, N. Y.;

and the following four persons had knowledge of the said usage at Muskogee, Okla., to wit:

C. T. Brewer, Muskogee, Okla.,
Mr. and Mrs. John G. Lieber, Muskogee, Okla.,
Edward Hastain, Phoenix, Arizona,
Reese V. Hicks, Kansas City, Mo.;

and the defendant further alleges that the structure and mode of operation of said Hastings incubator used by him at Muskogee, Okla., was described in an article entitled "The Mam-oth Incubator Out-Mammothed", published at Topeka, Kansas, in a periodical entitled "Poultry Culture", issued for February, 1912, Vol. XV. No. 5, pages 7, 14 and 15 thereof, copy in U. S. Department of Agriculture Library, Washington, D. C.; and the following persons had knowledge of said usage at Port O'Connor, Texas, to wit:

Milo M. Hastings, White Plains Road, Tarrytown, N. Y.,
E. T. Powers, Port O'Connor, Texas.

XVIII

The defendant, further answering, avers, on information and belief, that the said Samuel B. Smith patent in suit, 1,262,860, of April 16, 1918, is, as to the method claims [fol. 26] thereof, invalid and of no effect in law, for the reason that said Samuel B. Smith was not the true, original and first inventor of the method of hatching eggs, disclosed in said patent and pointed out in said method claims thereof, but that, on the contrary, Milo M. Hastings, of White Plains Road, Tarrytown, New York, was the true, original and first inventor of said method of hatching eggs, and was using reasonable diligence in adapting and perfecting the said invention and had reduced the same to successful practice in the United States before the same was invented or produced by said Samuel B. Smith, and that said patent in suit was unjustly granted on an application surreptitiously and illegally filed by said Samuel B. Smith and was unjustly and illegally issued in the name of the Buckeye Incubator Company as the assignee of said Samuel B. Smith.

XIX

Further answering, defendant avers and alleges that, as an additional, further or separate defense, the subject-

matter of said Letters Patent No. 1,262,860, in suit, is invalid and void as to the claims thereof, and in entirety, in that the subject-matter of each of said claims was not novel or patentable at the time of the alleged invention thereof by said Samuel B. Smith, as alleged in said Bill of Complaint; and that each of said claims, and said letters patent, is and are invalid and void for the reason that the subject-matter thereof had been invented, known, made and publicly used by or on behalf of Rolla Lawry, then of [fol. 27] Pacific, Missouri, and now of Port Chester, N. Y., and Roy F. Fullington, then and now of Clifton Hill, Missouri, prior to the alleged invention or discovery thereof by said Samuel B. Smith, or more than two years prior to the application of said Samuel B. Smith for said Letters Patent No. 1,262,860, at said Pacific and Clifton Hill, Missouri, and elsewhere, by said Rolla Lawry and said Roy F. Fullington, and others on their behalf, whereby such subject-matter of said claims and each thereof, and of said Letters Patent No. 1,262,860, in entirety, was not novel and patentable and did not amount to invention at the time of the alleged invention thereof by said Samuel B. Smith, and whereby said Samuel B. Smith was not the original and first inventor or discoverer of any material or substantial part thereof.

XX

Further answering, defendant avers and alleges, as an additional, further, alternative or separate defense, that said Samuel B. Smith surreptitiously or unjustly obtained said Letters Patent No. 1,262,860, in suit, for that which was, in fact, invented by another, Rolla Lawry, then of Pacific, Missouri, and now of Port Chester, New York, who was using reasonable diligence in adapting and perfecting the same, both before and after the time of the alleged invention thereof by said Samuel B. Smith, and who made, constructed, assembled and publicly used, an embodiment thereof prior to the time of said alleged invention thereof by said Samuel B. Smith.

[fol. 28] XXI

Defendant further alleges and avers, as an additional, further, alternative or separate defense, that said Samuel B. Smith surreptitiously or unjustly obtained said Letters

Patent No. 1,262,860, in suit, for that which was, in fact, invented by another, Roy F. Fullington, then and now of Clifton Hill, Missouri, who was using reasonable diligence in adapting and perfecting the same, both before and after the time of the alleged invention thereof by said Samuel B. Smith, and who made, constructed, assembled and publicly used, or caused to be made, constructed, assembled and publicly used, an embodiment thereof prior to the time of said alleged invention thereof by said Samuel B. Smith.

XXII

Defendant further alleges and avers that said patent No. 1,262,860, if valid, has been so narrowly construed in the Third and Sixth and Eighth Judicial Circuits that in said circuits any incubator possessed or used by defendant as in the bill of complaint alleged could not in any respect or particular infringe said Letters Patent No, 1,262,860, or any claim thereof.

XXIII

As a further, additional, separate and alternative defense, defendant alleges and avers that in the course of the prosecution of said application for said patent No. 1,262,860 in the Patent Office, claims were so repeatedly cancelled and amended and modified and substituted for, [fol. 29] and said Samuel B. Smith did so specifically disavow any breadth or scope for his pretended invention therein concerned, that said patent No. 1,262,860 must be very narrowly construed, if at all valid, and plaintiff is estopped from contending for said patent No. 1,262,860 any material or substantial scope or breadth of invention whatsoever or whereby said defendant could or could have in any respect or particular infringe or infringed said letters patent in and by the possession or use of any incubator which may have been by defendant possessed or used.

XXIV

As a further, additional, separate and alternative defense, defendant alleges and avers that because of the state of the art and analogous arts prior to the pretended invention of said patent No. 1,262,860, the subject-matter and disclosure of said letters patent and described and claimed

therein does not and could not constitute a patentable invention or arise to the dignity of invention.

XXV

As a further, additional, separate and alternative defense, defendant avers that said patent No. 1,262,960, is about to expire, and that it is against equity to grant any injunctions thereunder, and, therefore, the bill of complaint is without equity with any cause of action attempted to be set up therein.

Wherefore, defendant prays that the bill of complaint may be dismissed with costs allowed to defendant, and for [fol. 30] such other and further and just relief as to the Court may seem just and proper.

A. B. Hall. Louis C. Hall. Kwis, Hudson & Kent, of Counsel, Union Trust Bldg., Cleveland, Ohio. Raymond Ives Blakeslee, Solicitor and of Counsel for Defendant, 433 South Spring Street, Los Angeles, California.

In United States District Court

[Title omitted]

Motion for Preliminary Injunction

Now comes the plaintiff, Samuel B. Smith, and moves this Court that a temporary injunction, in accordance with the prayer of the Bill of Complaint, be issued as soon as [fol. 31] may be practicable and convenient to this Court, directed to the defendants, A. B. Hall and L. C. Hall, d. b. a. Hall Brothers, enjoining them from infringing upon the patent in suit here, and particularly upon claim 1 thereof, by the use of an incubator or incubators embodying the invention of said claim, and particularly from using in the incubation of eggs the structure referred to in the motion papers as the Robbins Nos. 17, 23 and 26I, such as shown in Exhibits 4 to 12, inclusive, attached to the affidavit of Joseph I. Taggart filed herein, or any modification or variation thereof; or from selling the same or offering the

same for sale to others, or of otherwise disposing of said incubators.

The reasons for this motion are fully set forth in the affidavit of Mr. Joseph I. Taggart and the Brief on Behalf of Plaintiff filed concurrently herewith.

Respectfully submitted, Samuel B. Smith, by Rockwell & Bartholow, Attorneys and Solicitors. A. L. Ely, of Counsel.

[fol. 32] IN UNITED STATES DISTRICT COURT

[Title omitted]

ORDER ON MOTION FOR PRELIMINARY INJUNCTION

Upon motion by the plaintiff in this proceeding, it is hereby Ordered:

1. That the accompanying Motion for Preliminary Injunction in this case be set for hearing at 12 o'clock on February 13th, 1935, at a term of this court to be held in the U. S. Court House and Post Office Building in New Haven, Connecticut.

2. That the service of this order upon defendants shall be made on or before January 25, 1935.

3. That defendants shall serve upon plaintiff's counsel any papers which defendants desire to use in opposition to this motion on or before February 4th, 1935; and that plaintiff shall serve upon defendants any reply papers plaintiff desires to use, on or before February 9th, 1935.

Carroll C. Hicks, U. S. District Judge.

New Haven, Conn., January 23, 1935.

[fol. 33] RETURN ON SERVICE OF WRIT

UNITED STATES OF AMERICA,
District of Connecticut, ss:

I hereby certify and return that I served the annexed Order together with Motion and Preliminary Injunction on the therein-named A. B. Hall and L. C. Hall, by leav-

ing a true and correct copy thereof with Gertrude Barbor in charge of office by request of L. C. Hall, at Wallingford, Conn., in said District on the 25th day of January, A. D. 1935.

Jacob D. Walter, U. S. Marshal, by Joseph M. Park, Deputy.

2 Services	$8.00
Expense	1.20
	$9.20

[fol. 34] IN UNITED STATES DISTRICT COURT

[Title omitted]

DEFENDANT'S JOINDER OF ISSUE

Come now defendants above named, by their solicitor and counsel, Raymond Ives Blakeslee, of Los Angeles, California, and with respect to all and singular showings and papers filed by plaintiff on his motion for preliminary injunction, and order thereon, herein, including affidavit of J. I. Taggart, and with respect to each part and the whole thereof, traverses and denies same, in any and all respects, save and except, only, with respect to the decision of the Supreme Court of the United States heretofore entered in the cause of Waxham v. Smith, et al., but denies that the same has controlling effect upon this Court pending the determination of the Petition for Rehearing to the Supreme Court now pending in said Waxham case, and denies that it has any binding effect upon this Court whatsoever, or could have, with respect to any incubator or method of using same of defendants not before the Court in said Smith, et al. v. Waxham cause.

[fol. 35] Defendants will also rely upon the papers, files, records, proceedings, showing or showings, and the annexed brief and other showing and authorities cited.

Dated, Los Angeles, California, February 13th, 1935.

Raymond Ives Blakeslee, Solicitor & Counsel for Defendants.

In United States District Court

[Title omitted]

Order for Preliminary Injunction—Filed February 28, 1935

This Cause having come on for hearing on plaintiff's motion for preliminary injunction and having been heard by the Court on affidavits filed by both parties, on testimony in open court, arguments, and briefs of counsel, it is hereby Adjudged, Ordered and Decreed:

1. That the patent in suit is valid.

[fol. 36] 2. That the title to the patent in suit is in the plaintiff, Samuel B. Smith, and that The Buckeye Incubator Company is not a necessary party.

3. That the defendants, A. B. Hall and L. C. Hall, doing business as Hall Brothers, have infringed claim 1 of the patent by the use of the several types of incubators known as Robbins Nos. 17, 23, and 26I, or similar incubators, in the incubation of eggs at their place of business in Wallingford, Connecticut.

4. That the defendants do not avoid claim 1 of the patent by removing the eggs from the incubators on or about the eighteenth day and placing them in a separate compartment for the balance of the full twenty-one days of the hatching period, but that such operation infringes upon claim 1 of the patent.

5. That an injunction shall issue forthwith enjoining the defendants henceforth from operating Robbins Incubators Nos. 17, 23, and 26I, or similar incubators.

6. That the operation of such injunction shall be effective on Monday, March 4, 1935, unless the defendants shall file in the office of the Clerk of this court a bond in the penal sum of Twenty-five thousand ($25,000.) Dollars, the bond to be approved by the Clerk of the court and by a surety company qualified and doing business in the State of Connecticut, conditioned upon the full payment by defendants of any damages and costs which may be adjudged against the defendants by reason of the infringement of

[fol. 37] plaintiff's patent by defendants in the use of any infringing device from January 23, 1935 to April 16, 1935.

Dated February 27, 1935.

Carroll C. Hincks, U. S. District Judge.

Approved as to form. A. L. Ely, Solicitor for Plaintiff. B. M. Kent, Solicitor for Defendants.

Clerk's certificate to foregoing paper omitted in printing.

[fol. 38] In United States District Court

[Title omitted]

Injunction

The President of the United States to A. B. Hall and L. C. Hall, Doing Business as Hall Brothers, Their Associates, Agents, Servants, Workmen, Employees, and Each of Them, Greetings:

Whereas, it has been represented to me in the United States District Court for the District of Connecticut that [fol. 39] the plaintiff, Samuel B. Smith, of Cleveland, Ohio, is entitled to an injunction against the defendants, A. B. Hall and L. C. Hall, individually and doing business as Hall Brothers, their associates, agents, servants, workmen, employees, and each of them, acting on behalf of said defendants, restraining them from the acts hereinafter mentioned;

Now, Therefore, you, the defendants, A. B. Hall and L. C. Hall, individually and doing business as Hall Brothers, your associates, agents, servants, workmen, employees, and each of them, acting in behalf of said defendants, are until the further order of this Court enjoined and restrained from operating or using in the incubation of eggs the incubators known as Robbins Incubators Nos. 17, 23 and 26I, or similar incubators infringing claim 1 of the Smith patent No. 1,362,980.

Provided That, the operation of this injunction shall be suspended if the defendants shall on or before March 4, 1935, file in the office of the Clerk of this Court a bond in the penal sum of Twenty-five Thousand Dollars ($25,-

000.00), the bond to be approved by the Clerk of the Court and by a surety company qualified and doing business in the State of Connecticut, conditioned upon the full payment by defendants of any damages and costs which may be adjudged against the defendants by reason of the infringement of plaintiff's patent by defendants in the use of any infringing device from January 23, 1935, to April 16, 1935. [fol. 40] Witness, The Honorable Carroll C. Hincks, Judge of the United States District Court for the District of Connecticut this 28th day of February, 1935, in the one hundred fifty-ninth year of the independence of the United States.

C. E. Pickett, United States District Court.

A true copy. Attest: C. E. Pickett, Clerk. (Seal.)

In United States District Court

[Title omitted]

Motion for Leave to Amend Answer

Now come the Defendants, by their attorneys, Arthur E. Paige and Frank E. Paige, and submit that the Defendants use incubating equipment purchased from Robbins Incubator Company of 1523 Stout Street, Denver, Colorado, [fol. 41] which manufactured it. That the manufacturer agreed to adequately defend said Defendants against any litigation for infringement of Letters Patent based upon the possession and use of said equipment by said Defendants and warranted to save said Defendants harmless from any such litigation.

That pursuant to said warranty, said manufacturer employed R. I. Blakeslee and B. M. Kent to enter an appearance for Defendants in the above entitled case and to present an adequate defense in their behalf.

That, believing that the defense which has been so far presented by said attorneys of the manufacturer is inadequate, these Defendants, this First day of May, 1935, have constituted and appointed said Arthur E. Paige and Frank E. Paige as their attorneys in this case, and said attorneys have discovered that the Answer filed on behalf of these

Defendants by Messrs. Blakeslee and Kent is in fact a garbled copy of an Answer prepared and filed by said Blakeslee in the case of Samuel B. Smith v. Fontana Farms Company, pending as Equity No. 244-M in the United States District Court for the Southern District of California, Central Division. That, consequently, the Answer on behalf of these Defendants is extensively erroneous in its reference to these individual defendants as "it" throughout the entire Answer and in the denial in paragraph XI "that defendant, prior to or within six years of the filing of the bill of complaint or at any time or in any manner, was in possession of or was using in the hatching of eggs, at a place of business in Fontana, California". [fol. 42] These Defendants are not charged in Plaintiffs' Bill herein with any use in Fontana, California.

Therefore, and in view of the additional matter pleaded by Plaintiff re his Motion for Preliminary Injunction, these Defendants move for leave of the Court or Judge to amend their Answer to the form appended hereto.

Arthur E. Paige, Frank E. Paige, Attorneys for Defendants, 2312 Spruce Street.

Philadelphia, Pa., May 3rd, 1935.

AEP/CER.

In United States District Court

[Title omitted]

Amended Answer

Defendants, without waiving any right which may be based upon any imperfection in Plaintiff's Bill, for answer thereto say:

[fol. 43] I. Defendants admit that the Plaintiff is a citizen of the United States and a resident of Cleveland, Ohio.

II. Defendants admit that their residence and place of business is at Wallingford, Connecticut, but deny that they or either of them have or has committed any act of infringement there or elsewhere.

III. Defendants admit that if this Court has jurisdiction in this case it is because it is a suit in equity alleged to arise under and be based upon the patent laws of the United States.

IV. Defendants deny all of the allegations of paragraph IV of Plaintiff's Bill.

V. Defendants admit that on October 26, 1916, the Plaintiff filed in the United States Patent Office an application for Letters Patent of the United States for an Improvement in Incubators.

VI. Defendants admit that pursuant to said application Letters Patent of the United States No. 1,262,860 was granted April 16, 1918, to Samuel B. Smith, as assignor to The Buckeye Incubator Company, a corporation of Ohio, but deny all of the other allegations of paragraph VI of Plaintiff's Bill.

VII. Defendants deny all of the allegations of paragraph VII of Plaintiff's Bill.

VIII. Defendants deny that Plaintiff or his alleged predecessor entitled The Buckeye Incubator Company has been [fol. 44] at all times the sole and exclusive owner of said patent.

IX. Defendants deny all of the allegations of paragraph IX of Plaintiff's Bill. On the contrary, Defendants allege that incubators manufactured and used by the Plaintiff in accordance with the invention of said Letters Patent have not only proven to be inferior to other incubators but destructive of life in a large percentage of the eggs incubated therein.

X. Referring to paragraph X of Plaintiff's Bill, Defendants admit that the patent in suit has been adjudicated in a large number of suits but deny that it has been unanimously held valid in such suits. On the contrary, Defendants allege that in the case of The Buckeye Incubator Company and Samuel B. Smith v. William F. Hillpot, reported in 22 Fed. (2d) 855, it was expressly adjudged and decreed "that said patent does not disclose a successful method of operation and, consequently, method claims 1 and 2 thereof are invalid and void". Moreover, Defendants allege that

said patent was held to be not infringed in many of said suits.

XI. Defendants admit all of the allegations of paragraph XI of Plaintiff's Bill.

XII. Defendants deny all of the allegations of paragraph XII of Plaintiff's Bill. On the contrary, Defendants allege that the method of hatching employed by them is essentially different from that defined in claim 1 of said patent in suit both in the several steps therein defined and in the conditions under which said steps are effected, and in the result thereof, and that the incubator structures they employ are [fol. 45] essentially different from any structure disclosed in said Letters Patent in suit. That the incubators used by Defendants are constructed and arranged in accordance with the disclosures of Letters Patent of the United States Reissue No. 18,984 dated October 31, 1933, granted to John L. Robbins of Edgewater, Colorado, for Incubator, upon surrender of original Letters Patent No. 1,728,980 granted September 24, 1929, to him.

XIII. Referring to paragraph XIII of Plaintiff's Bill, Defendants admit that they were duly notified in writing of the patent in suit and of their alleged infringement thereof, but deny the other allegations of said paragraph.

XIV. Defendants deny all of the allegations of paragraph XIV of Plaintiff's Bill and particularly that they or either of them have realized any profits or gains in connection with any act of infringement complained of in Plaintiff's Bill, and deny that Plaintiff has any right to the discovery contemplated in said paragraph.

XV. Defendants aver that the Plaintiff, Samuel B. Smith named in the patent in suit, was not the first or original inventor of anything disclosed in said Letters Patent No. 1,262,860 in suit that was new or useful or that was not known or used or patented or described in printed publications before his alleged invention or discovery thereof, and that the subject matter of said patent is anticipated by and involves no invention over the prior state of the art as disclosed by the following Letters Patent and publications:

[fol. 46] Letters Patent of the United States

Number	Date	Name
3,019	Mar. 30, 1843	N. E. Guerin
120,253	Oct. 24, 1871	H. Endemann
152,644	June 30, 1874	E. A. and C. W. Jones
193,616	July 31, 1877	E. S. Renwick
217,148	July 1, 1879	E. S. Renwick
240,004	Apr. 12, 1881	F. H. Bate
271,184	Jan. 23, 1883	H. Altenbrand
272,744	Feb. 20, 1883	A. H. Morgan
280,490	July 3, 1883	C. Lumpp
286,756	Oct. 16, 1883	C. F. Winkler
297,676	Apr. 29, 1884	G. Conant
320,463	June 23, 1885	L. Cutting
330,457	Nov. 17, 1885	C. Bassini & A. Heyden
335,961	Feb. 9, 1886	E. S. Renwick
344,474	June 29, 1886	J. W. Campbell
360,223	Mar. 29, 1887	E. H. Johnson
410,110	Aug. 27, 1889	J. H. Knowles & J. K. Proctor
426,321	Apr. 22, 1890	J. K. Proctor & J. H. Knowles
432,282	July 15, 1890	J. K. Proctor & J. H. Knowles
456,407	July 21, 1891	F. Frey & T. M. Wayne
Re. 11,460	Dec. 25, 1894	J. K. Proctor
535,178	Mar. 5, 1895	G. W. Schwartz, Jr.
553,728	Jan. 28, 1896	J. K. Proctor
559,676	May 5, 1896	T. R. C. Christianson
586,088	July 6, 1897	W. P. Jones
591,070	Oct. 19, 1897	P. H. Morgan
599,145	Feb. 13, 1898	George Kutz

[fol. 47]

614,493	Nov. 22, 1898	C. S. Newsom
691,837	Jan. 28, 1902	V. S. Bell
709,650	Sept. 23, 1902	C. P. Scott
725,079	Apr. 14, 1903	O. C. Hawkins
745,458	Dec. 1, 1903	F. C. Perkins
789,719	May 16, 1905	J. M. Day
798,697	Sept. 5, 1905	F. C. Perkins
828,181	Aug. 7, 1906	G. H. Boyd
832,151	Oct. 2, 1906	C. S. Newsom
845,909	Feb. 12, 1907	F. M. Peters & H. H. Hungerford
885,328	Apr. 28, 1908	E. F. Osborne

Letters Patent of the United States—Continued

Number	Date	Name
891,019	June 16, 1908	L. Verna
916,273	Mar. 23, 1909	A. C. Coons
916,454	Mar. 30, 1909	V. C. Koons
917,483	Apr. 6, 1909	C. C. Peck
946,911	Jan. 18, 1910	G. C. Andrews
949,653	Feb. 15, 1910	J. H. Klinke
992,622	May 16, 1911	J. Wiebe
1,010,809	Dec. 5, 1911	J. Schmidt & H. Schutterle
1,034,205	July 30, 1912	J. C. Cogburn
1,075,747	Oct. 14, 1913	C. W. Zimmer
1,086,903	Feb. 10, 1914	A. Di Domenica, et al.
1,100,146	June 16, 1914	J. O. Olson
1,137,752	May 4, 1915	G. E. Goldstein
1,158,447	Nov. 2, 1915	C. J. Coleman
1,160,793	Nov. 16, 1915	S. S. Van Keuren
1,165,958	Dec. 29, 1915	T. B. Freas
1,195,705	Aug. 22, 1916	P. S. Martin
1,205,445	Nov. 21, 1916	R. F. Fullington

Foreign Letters Patent

117,069 (German)	Feb. 4, 1901	J. Mann
155,917 (German)	Nov. 7, 1901	E. Stulik

[fol. 48] **Publications**

The publications identified in paragraphs XIX and XX of this Answer.

A book by Milo M. Hastings (pages 104-105), entitled "The Dollar Hen", published by the Arcadia Press, N. Y., 1909. A copy is in the Public Library in New York, N. Y.

An article entitled "Indoor Chicken Factories", published in the Boston Sunday Globe, of Boston, Mass., issue of November 10, 1912. A copy is in the office of the Boston Globe, at Boston, Mass.

An article entitled "Hatching Chickens by Wholesale", published in the Technical World, at Chicago, Illinois, in the issue of April, 1913 (pages 248-249). A copy is in the Public Library in New York, N. Y.

An article entitled "Incubator" appearing on pages 652-653 of Ure's Dictionary of Arts, Manufacturers and Mines, published in London, England, by Longmans, Green & Co.,

in 1867. A copy is in the Public Library at Minneapolis, Minn.

An article entitled "Incubator", apearing on pages 1177 and 1178 of Knight's American Mechanical Dictionary, Vol. II, published at Boston, Mass., by Houghton, Mifflin & Company, in 1884.

An article entitled "Ventilator", appearing on pages 2704 and 2705 of Knight's American Mechanical Dictionary, Vol. III, published at Boston, Mass., by Houghton, Mifflin & Company, in 1884, and particularly the cut (Fig. 6960) appearing on page 2705, entitled "Sectional View of the Senate Wing, United States Capitol, showing the Pres-[fol. 49] sure and Exhaust Ventilating Apparatus"; and the description thereof which appears on the said page directly below said cut.

And other publications, now unknown to these Defendants, but which, when discovered, they pray leave to add by amendment to this, their Answer in this suit.

XVI. Answering Plaintiff's additional pleadings presented on motion for preliminary injunction herein; Defendants admit that in the case of Samuel B. Smith, Petitioner, v. E. H. Snow, etc., the Supreme Court of the United States, in a decision dated January 7, 1935, set forth in Plaintiff's Exhibit 2 of record in this case, construed the patent in suit upon assumptions of what were relevant scientific facts set forth in said decision and held only claim 1 of said patent valid in view of said assumptions when interpreted to be limited in the manner set forth in said decision. However, Defendants allege that said Supreme Court was grossly misled as to the alleged scientific facts contemplated, which are contrary to the actual facts known to those skilled in the art of incubation, but, in view of that interpretation, the method of hatching employed by the Defendants and upon which the charge of infringement is based is certainly excluded from the scope of said claim 1.

Moreover, Defendants allege that in each of the cases of Samuel B. Smith v. Fontana Farms Company, in Equity No. 244-M, and Samuel B. Smith v. L. A. Austin, et al., in Equity No. 245-M, in the District Court of the United States for the Southern District of California, Central Division, Judge Paul J. McCormick, who had sustained the patent in [fol. 50] suit in the case of Samuel B. Smith and The Buckeye Incubator Company v. Herbert H. Waxham, etc. (cited

by the Plaintiff in this case), on a Motion for Preliminary Injunction supported by the same evidence and arguments adduced on Plaintiff's motion for preliminary injunction in this case, refused to grant such injunction, and his decision was not reversed by the United States Circuit Court of Appeals for the Ninth Circuit, to which an appeal was taken by the Plaintiff herein.

XVII. Defendants deny all allegations made to this Court, on behalf of Plaintiff, to the effect that the alleged invention disclosed in the Smith Patent 1,262,860 in suit is broadly a method of incubation. On the contrary, each of the three method claims 1, 2, and 3 of said patent is specifically limited to "a method of hatching a plurality of eggs". Defendants submit that said "method of hatching" as construed and interpreted by the Supreme Court of the United States with reference to claim 1 of said patent in the decisions cited on behalf of Plaintiff is certainly limited to the maintenance of endothermic and exothermic eggs in heat exchanging relation in the same inclosure and in an atmosphere maintained at the same uniform temperature throughout the entire period of gestation which, with ordinary chicken eggs, is twenty-one days.

XVIII. Defendants deny all allegations made to this Court, on behalf of Plaintiff, to the effect that Plaintiff's Exhibit 13 illustrates relative progressive conditions of in-
[fol. 51] cubation characteristic of the invention disclosed in the patent in suit. On the contrary, Defendants allege that such allegations are grossly misleading, for the reason that the relative endothermic and exothermic conditions of an incubating egg illustrated in said Plaintiff's Exhibit 13 are impossible to produce or attain under the conditions of artificial incubation specified in the patent in suit and to which claims 1, 2, and 3 thereof are certainly limited.

XIX. Defendants allege that each of the claims of the patent in suit is invalid and void for the reason that the subject matter thereof was in public commercial use by the Plaintiff, Samuel B. Smith, at Attica, Ohio, and at Cleveland, Ohio, more than two years before the application for said patent was filed in the Patent Office, and that such

prior public use was within the knowledge of the following named persons:

Samuel B. Smith, the Plaintiff.
James W. Miller, residing at Bucyrus, Ohio.
Albert H. Wilson, residing at Toledo, Ohio.
Edward H. Uhle, residing at Cleveland, Ohio.
Mr. and Mrs. Garrick, residing at Cleveland, Ohio.

That the construction and arrangement of said incubating structures used by the Plaintiff Smith at Attica, Ohio, and at Cleveland, Ohio, to effect the method of hatching eggs disclosed in said patent in suit and described in the method claims thereof, are described in an article published in the newspaper entitled "Sunday Plain Dealer", published at [fol. 52] Cleveland, Ohio, in the issue of Sunday, February 23, 1913, entitled "Mammoth Incubator will turn out 20,000 Chicks per Week", and also in an article published in the "Cleveland Leader", of Cleveland, Ohio, on Sunday, February 22, 1914, entitled "Cleveland Boasts Largest Hatchery".

XX. Defendants aver that the patent in suit is invalid and void as to the method claims thereof, for the reason that the method therein described was put into public use in the United States more than two years before the application for said patent in suit was filed in the Patent Office, by Milo M. Hastings, now residing at Tarrytown, N. Y.; such use having been successfully effected by Milo W. Hastings in incubators designed and built by him or under his direction on the farm of Walter B. Davis, at Brooklyn, in the State of New York, and at Muskogee, in the State of Oklahoma, and at Port O'Connor, in the State of Texas. That such method of use on the farm of Walter B. Davis was known to three persons, namely:

Milo M. Hastings, residing at White Plains Road, Tarrytown, N. Y.

Walter B. Davis, residing at Jersey City, N. J.

Edgar Chambless, residing at 122 E. 34th Street, New York, N. Y.

That such method of use at Muskogee, Oklahoma, was known to four persons, namely:

C. T. Brewer, residing at Muskogee, Okla.
Mr. and Mrs. John G. Lieber, residing at Muskogee, Okla.
[fol. 53] Edward Hastain, residing at Phoenix, Arizona.
Reese V. Hicks, residing at Kansas City, Mo.

That the structure and mode of operation of said Hastings Incubator at Muskogee, Oklahoma, was described in an article entitled "The Mammoth Incubator Out-Mammothed", published at Topeka, Kansas, in a periodical entitled "Poultry Culture", issued for February, 1912, Vol. XV, No. 5, pages 7, 14, and 15 thereof, a copy of which is in the United States Department of Agriculture Library, at Washington, D. C.

That such method of use at Port O'Connor, Texas, was known to two persons, namely:

Milo M. Hastings, residing at White Plains Rd., Tarrytown, N. Y.
E. T. Powers, residing at Port O'Connor, Texas.

XXI. Defendants aver that said patent in suit is, as to the method claims thereof, invalid and void, for the reason that the Plaintiff, Samuel B. Smith, was not the true, original, and first inventor of the method of hatching eggs disclosed therein but that, on the contrary, said Milo M. Hastings, of White Plains Road, Tarrytown, New York, was the true, original and first inventor of said method of hatching eggs, and was using reasonable diligence in adapting and perfecting said invention and had reduced the same to successful practice in the United States before the same was invented or adopted by said Samuel B. Smith, and that said [fol. 54] patent in suit was illegally granted on an application surreptitiously and illegally filed by said Samuel B. Smith and was illegally issued to the said Buckeye Incubator Company as the assignee of said Samuel B. Smith.

XXII. That the patent in suit is invalid and void as to each of the method claims thereof for the reason that the subject matter of each of said claims had been invented and publicly used by Madison Cooper, now residing at Calcium, New York; such use having been effected by him at Pacific, Missouri. That such prior public use had also been effected at Pacific, Missouri, by Rolla Lawry, now residing at White Plains Road, Tarrytown, New York, and Roy F. Fullington, then and now residing at Clifton Hill, Missouri.

XXIII. That the Plaintiff Samuel B. Smith is estopped from contending that any claim of said Letters Patent 1,262,980 in suit is of such breadth as to describe the construction or method of use of any incubator employed by Defendants, by reason of the specific disavowal of any such breadth or scope in the prosecution of the appeal from the adverse decision in the case of The Buckeye Incubator Company and Samuel B. Smith v. William F. Hillpot, reported in 22 Fed. (2d) 855, which appeal was No. 3697 of the October Term, 1927, prosecuted in the United States Circuit Court of Appeals for the Third Circuit, and reported in 24 Fed. (2d) 341. That in the prosecution of that appeal, in order to secure a reversal of the decision of the lower court holding claims 1 and 2 of said patent in suit invalid and [fol. 55] void, said Plaintiff Smith acquiesced in the narrow construction and interpretation of those claims by the U. S. Circuit Court of Appeals in the Third Circuit.

Wherefore, Defendants pray that the Bill of Complaint may be dismissed with costs allowed to Defendants, and for such other and further relief as to the Court may seem just and proper.

A. B. Hall and L. C. Hall, d. b. a. Hall Brothers, by Arthur E. Paige, Frank E. Paige, Their Attorneys, 2312 Spruce Street.

Philadelphia, Pa., May 3rd, 1935.

AEP/CEI.

[fol. 56] In United States District Court

[Title omitted]

Stipulation as to Narrative Statement of Evidence

It is hereby stipulated by and between Counsel for the respective parties that the annexed "Statement of Testimony under Rule 75(b)" be substituted for the "Statement of Testimony under Rule 75(b)" lodged with the Clerk on August 14, 1935, and that said annexed narrative statement of the evidence is hereby approved.

Frank E. Paige, Counsel for Defendants-Appellants.

August 29, 1935.

A. L. Ely, Counsel for Plaintiff-Appellee.

August 30, 1935.

[fol. 57] In United States District Court for the District of Connecticut

In Equity. No. 2369

Samuel B. Smith, Plaintiff,

v.

A. B. Hall and L. C. Hall, d. b. a. Hall Brothers, Defendants

Narrative Statement of Evidence

The following is Defendants-Appellants' condensed statement in narrative form of the testimony introduced upon the trial made in pursuance of Equity Rule 75(b) and lodged in the Clerk's office for the examination of Plaintiff as provided by said Rule.

An opening statement was made by Counsel for Plaintiff, said Counsel stating that Plaintiff would rely upon claim 1 of the Letters Patent in suit. Plaintiff then offered the following exhibits, all of which were admitted and received in evidence:

Offers in Evidence

Plaintiff's Exhibits Nos. 1-17 inclusive, exhibits which are attached to affidavits of Joseph I. Taggart. As Plaintiff's Exhibit No. 18 the testimony on the Motion for Preliminary Injunction. As Plaintiff's Exhibit No. 19, the first affidavit of Joseph I. Taggart dated January 19, 1935. As Plaintiff's Exhibit No. 20, the second affidavit of Joseph I. Taggart dated February 20, 1935. As Plaintiff's Exhibit No. 21, a [fol. 58] Stipulation re (a) the use in this case of testimony taken in former cases with regard to the Hastings prior use; (b) title to patent in suit as alleged in Bill of Complaint; and (c) right of Plaintiff to recover on all infringements of the patent in suit. As Plaintiff's Exhibit No. 22 a booklet containing copies of the decisions of the Supreme Court.

ALMON B. HALL, called as an adverse witness on behalf of Plaintiff, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Ely:

I am one of the Defendants in this case and reside in Wallingford, Connecticut, where, with my brother L. C. Hall, we operate a commercial hatchery under the firm name of Hall Brothers. I have been engaged in the commercial hatching of eggs for about 25 years and have always been located in Wallingford. I attended the International Baby Chick Convention at Minneapolis in 1929, and it was at the convention or right after the convention that I purchased my first Robbins incubator. Prior to the purchase of the first Robbins 23 in 1929, we used the Hall Mammoth Incubator which is known to the trade as a sectional hot water type incubator. We have no connection with the company manufacturing the Hall incubator. It was one of the standard incubators on the market at the time. We had an entire machine consisting of a number of small sections. [fol. 59] In each section the eggs were set in one layer at one time, and the machine was known as a still air machine as it had no means of propelling a current of air over the eggs. That was the best incubator I knew about on the market of that type.

I believe it was in September, 1929, that we purchased our first Robbins machine on a trial basis to determine whether it had some advantages over the old sectional type, and ran the original 23 during the balance of the 1929 season, testing it in comparison with the sectional type incubator we had used before. We were contemplating replacing our old sectional types with a more modern draft type incubator. We merely operated the machine in a commercial way. As a result of such trial, we purchased additional Robbins incubators. The Robbins 23 incubator which we received in 1929 had a single chamber in which the eggs were carried through the full 21 days, and said incubator was provided with a large drum at one side in which the eggs were set for the first 18 days of the hatching period. That Robbins 23 appears to be shown in the photograph Plaintiff's Exhibit No. 11, our 23 incubator having a cabinet substantially as shown in that photograph and having

on the right hand side a large tilting drum with a series of racks in it. Plaintiff's Exhibit No. 9 appears to show the drum filled with trays, and I do not see any difference between the drum shown in that picture and the one we had in our Robbins 23. Plaintiff's Exhibit No. 10 shows the drum in the opposite tilted position. We set eggs in the drum at intervals of three and four days a part, in other [fol. 60] words, we set partial capacity of that drum twice a week, and after each batch of eggs had been in the drum for 18 days they were taken over and placed in the stationary hatching trays at the left. At the rear of the chamber there were located two large fans which are shown in Exhibits Nos. 11 and 12. On the rear wall, as shown in Exhibit 11, were a series of inlet openings which partially were fresh air intakes to take in a certain amount of fresh air through the openings. The incubator had adjustable slides on the back so that the amount of fresh air taken in could be varied. The incubator also had small openings on the top for the discharge of foul air but said foul air openings were not used always.

I believe that the letter appearing on Robbins Catalog C is a true copy of a letter dated May 28, 1930, written and signed by me and addressed to The Robbins Incubator Company. (A photostatic copy of said letter was offered as Plaintiff's Exhibit No. 23.) By May, 1930, we had purchased and installed seven Robbins No. 23 incubators in our plant, and had purchased and installed three No. 17's. The #23 contains approximately 23,000 eggs and the #17 contains something over 17,000 eggs. There was no difference, except size, between the #23's and the #17's. The #17 had the same tilting drum on the right and hatching trays on the left, fans on the back wall and ventilation openings. We set eggs in the same staged incubation in the No. 17's as was our practice in the No. 23's.

The letter reproduced on page 63 of Robbins Catalog D is a true reproduction of my letter dated June 15, 1931, and the facts stated therein are true. (Plaintiff offered the [fol. 61] reproduced copy of said letter as Plaintiff's Exhibit No. 24.) We added two No. 62 multi-hatchers, each No. 62 multi-hatcher having the capacity of two No. 10 separate hatchers. After the purchase of the No. 62 multi-hatchers, we left vacant the space occupied by the hatching trays in the old 23's and used the old 23's for incubation

only and did our hatching in the No. 62 multi-hatchers. In June, 1931, we had 350,000 egg capacity. In operating these hatchers we did not change the system of setting or make any other changes in the old 23's. Instead of hatching the eggs in the racks to the left we simply put them in our new #10 hatchers. We changed gradually over to the Robbins incubators.

I do not recall when we stopped using our old sectional machines as we tapered off from the use of the sectional machines as we went over into the Robbins. At the end of the 1932 hatching season I wrote another letter to Robbins Incubator Company and Plaintiff's Exhibit No. 25 appears to be a true copy of that letter. From the letter dated May 26, 1932, it would appear that we had discontinued our old hot water equipment by that date, although I do not recall when we dismantled the last of the old sectional equipment. In other words, we destroyed and scrapped it. We averaged from 10 to 15% greater hatches of the eggs set by using Robbins machines instead of the old sectional type. I mean, assuming we had a 60% hatch in the old sectional type, we got a 70 or 75% hatch in the Robbins equipment. That is, 70 to 75% of all eggs set, is what we were getting in our Robbins equipment. The copy of the letter dated October 6, 1933, appears to be a true copy of a letter which [fol. 62] I wrote to Robbins Incubator Company on that date and the facts stated therein are true. (A photostatic copy of said letter dated October 6, 1933, was offered as Plaintiff's Exhibit No. 26.) We scrapped our sectional machines prior to October 26, 1933.

During the year 1933, we added 250,000 egg capacity to our plant: We added four Model 62's consisting of two incubators of 26,000 egg capacity each. With each of the two 26,000 egg capacity incubators there was what is known as a No. 10 hatcher. The hatches were increased somewhere between 10 and 20%, probably 10%, by use of the Robbins machines, and our total capacity was approximately 650,000 after the purchase of the four Model 62 machines.

The letter reproduced on page 3 of a folder known as "Robbins News" of September, 1934, is a correct reproduction of a letter I wrote on August 25, 1934, and the facts stated therein are true. The check reproduced above the letter is a correct reproduction of our check for $5,000.00 to The Robbins Incubator Company. (The folder entitled

"Robbins News" was offered as Plaintiff's Exhibit No. 27.)

In 1934, we added a standard Robbins Model No. 125 consisting of four 26-I incubators and two of the No. 10 hatchers. We increased our egg capacity to 750,000. I do not know whether this purchase was made before or after the decision of the Circuit Court of Appeals for the Ninth Circuit, and the purchase was not made with the object of helping out Robbins. When we purchased our first Robbins in 1929, I knew that the Robbins machine was a comparatively new machine on the market and that the Smith machine had [fol. 63] been on the market for a number of years before Robbins. I saw the Robbins machines at the Minneapolis Convention and I knew the Smiths were on display there. I knew the Smith was on the market for a number of years before we bought the Robbins. We had an agency and sold a number of Robbins machines in this territory, for which sales we collected a commission.

I sponsored, but was not the author of, an article entitled "Ten Years Growth of a Connecticut Hatchery" in an issue of the New England Poultryman dated April 15, 1935, and I believe that the statements contained in the article about production are substantially true. (When pages 25, 118 and 119 of said New England Poultryman dated April 15, 1935, were offered in evidence by Plaintiff, they were objected to by Counsel for Defendants on the ground that they had no bearing upon the question of infringement. The objection was sustained by the Court and an exception noted. Said exhibit was marked Plaintiff's Exhibit No. 28 for identification.)

We received instruction manuals of Robbins electrical incubators from time to time shortly after the separate hatchers were put on the market, and said manuals contained a typewritten insert as follows: "We, therefore, most urgently recommend that from now on you transfer the eggs in the Robbins incubator at the end of the 19th day. We realize it might be difficult for some of you to break away from the old established method of testing eggs on the 18th day, but we are sure you will find our recommendations worth while." Hall Brothers, in operating the so-called separate hatchers, do not carry their eggs in the incubating [fol. 64] drums until the 19th or 20th day, but it is our practice to remove them at the end of the 18th day.

I am not familiar with the publication entitled "Smith's Chickagrams" shown me, nor do we receive it regularly from the Smith Incubator Company, nor do I recall Smith having sent me a copy of this particular issue containing a notice of the Robbins case in California. (Said publication "Smith's Chic-agrams" dated August, 1930, was marked Plaintiff's Exhibit No. 29 for identification.)

We received a letter dated August 10, 1932, and a letter dated April 11, 1934 (said letters and registry receipts being respectively offered in evidence as Plaintiff's Exhibits Nos. 30 and 31.)

An organization know as the Hatcherymen's National Defense League was organized as a sincere desire on the part of Robbins users to protect themselves against the apparent racketeering of Samuel B. Smith. The organization was formed of a number of Robbins users, and I was Treasurer of that organization. The purpose of the organization was to collect funds to combat litigation on the Smith patent against Robbins users. Funds were received by the Hatcherymen's National Defense League. The Hatcherymen's National Defense League is not contributing to the defense of this case nor are any of the funds of the Hatcherymen's National Defense League being used to defend this case. Mr. Guy A. Leader, of York, Pennsylvania, was President of the Hatcherymen's National Defense League, and K. I. Miller, of Lancaster, Missouri, was Vice-President.

(The witness Hall was not cross examined regarding that testimony.)

[fol. 65] JOSEPH I. TAGGART, called as a witness on behalf of Plaintiff, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Ely:

I am 47 years of age and reside at Cleveland, Ohio. I am Assistant General Manager of the Smith Incubator Company, in charge of research and experiments, and the installation and operation of incubators in the field. I have oversight of this patent litigation and have testified as an expert with respect to the patent in suit in a number of cases. I was present and testified as an expert in con-

nection with the Smith v. Waxham case in California brought in October, 1929, in which case there was involved the Robbins incubator No. 23. Plaintiff's Exhibits Nos. 8, 9 and 10, 11 and 12, used by Mr. Hall in his testimony, are pictures taken of the machine which was introduced as an exhibit in that case. The patent in suit was gotten out and designed for operation of incubators which were more extensive than anything that was used up to that time, which incubators had a large chamber with eggs arranged therein in superimposed trays and also wherein they had eggs in different stages of incubation. I might state that prior to this patent the incubators that were in use consisted of a single layer incubator as the eggs were arranged at one level and set at one time. In the patent, the eggs are at a number of levels and are set at consecutive times, so that when filled, the incubator will contain eggs in a number of different stages of incubation. That is the first feature of the patent. The second feature is that a blast of [fol. 66] air was applied to the eggs so that there are definite air currents through the machine of sufficient velocity to keep the temperatures substantially uniform at all points. Those two items, that is, the setting of eggs in different stages of incubation, arranging them in different levels and applying a current of air and then making that current of air strong enough to all parts of the machine to equalize the temperature, those are the new features that are in this patent.

I will describe, with reference to Plaintiff's Exhibit No. 13, the thermal characteristic of an egg during the process of incubation. When an egg is first placed in an incubator it is necessary to apply heat to it to bring it up to the incubating temperature, and it is necessary to keep adding additional heat to it for the first ten or eleven days. During that priod the egg is absorbing heat, and even when placed in an incubator with a temperature of 99, the egg will not get up to a temperature of 99 until about the tenth or eleventh day. During the period of that time it may be as low as 98. After about the fourth or fifth day the embryo within the egg is developing heat in an increasing quantity each day up to the seventeenth day. This animal heat which is developing becomes great enough to overcome the other heat that is being absorbed, so that after the eleventh

day the egg is giving off heat to the incubator. It is generating heat in excess of what is being absorbed so that after the tenth or eleventh day the egg becomes exothermic while prior to that time it is endothermic.

The area colored red in Plaintiff's Exhibit 13 represents [fol. 67] excess units of heat generated by the egg that must be given off by the egg to bring it down to incubating temperature. The area colored blue represents units of heat that must be absorbed by the egg to keep it at incubating temperature. The red area is represented by two different shades, the heavier portions representing the units of heat given off during the period up to the eighteenth day. The heat generated from the eleventh to the eighteenth day is over twice the heat units that must be absorbed during the first ten or eleven days.

Robbins Model No. 26 differs from Robbins Model 23 in that the horizontal hatching trays at the end of the machine have been removed and the turning rack has been enlarged so that it takes up the entire space. The first Model 26s that were put on the market differed from the Model 23s only in that the turning rack is longer. There was no difference in the direction of the current or the air movement in the Model 26-I over Model 23. In both these incubators the air moves outward from the fans circumferentially until it strikes the wall ceiling, and floor. Then it goes to the front of the incubator and is thrown back to the egg trays and to the fans again, moving in continuous cycles.

On the eighteenth day the embryo has been developed to a point where it is no longer necessary to turn the eggs, and it is about ready to pip. It can move about in the shell on its own accord and has passed the stage where it needs careful attention. It can stand more grief from that period on than it could up to that period.

Plaintiff's Exhibits 4, 5 and 6 correctly show the construction of Robbins 26-I incubators and were made to [fol. 68] scale from a Model 26-I. The speed of rotation of the fan is substantially the same as in Model 23 and the location of the intake openings are also substantially the same. One-sixth of the capacity of the drum is set at about three to four days' intervals.

Plaintiff's Exhibit 29 for identification, "Smith's Chicksgrams" dated August, 1930, is a house organ that was put

out by Smith at that time and which was mailed to all known hatcheries in the United States and to various people who were interested in any way in the poultry business. This particular issue went to twenty thousand, eight hundred and some people. Hall Brothers were on our regular mailing list and it went to the complete list. The notice at the lower right hand corner is the notice that we inserted in this issue following the decision of the Master in the Waxham case. After the District Court affirmed the decision in the Waxham case we sent the notice dated in 1932 to the defendant. When the District Court was affirmed by the Circuit Court of Appeals we sent out the letter of April 11, 1934. When the Supreme Court affirmed the Ninth Circuit and held the Robbins Incubator to be an infringement notices were sent to this defendant. The public was notified of the existence of the patent in suit by the application of a patent plate to the Smith machines which are manufactured by Dr. Smith through the Smith Incubator Company. The Smith machines were first put out on the market in 1922 and have been sold each year since then and have been marked with a notice of the patent. I produce a patent plate that has been placed upon the machines since 1925 and bears the notice "This incu-[fol. 69] bator is manufactured under United States Patents Nos. 1,262,860, April 16, 1918, and 1,543,130—June 23, 1925". This plate was on the commercial machines manufactured by Smith in 1929. (Said plate was offered in evidence as Plaintiff's Exhibit 32.)

The propulsion of a current of air in both the Smith and Robbins incubators keeps the temperature of the air substantially uniform. It will pick up heat units from the eggs that are warmer than the air and will give up heat units to the eggs that are cooler than the air. In the Robbins incubators Models 17, 23, 26-I, and 1254 the air passes over eggs which are in the exothermic and endothermic condition and it does not make any difference whether or not eggs are taken out after they have reached the nineteenth day. The capacity of Model 125 is 125,440 eggs including the hatching unit of approximately 18,000 egg capacity. Model 125 consists of 4-No. 26-Is and two No. H-10s. It calls for six settings. About 18,000 eggs are set at one time.

Cross-examination.

By Mr. Paige:

When I testified about "incubating temperatures" on direct examination, with reference to the diagram Plaintiff's Exhibit No. 13, I meant a temperature of 99° F. My experience has been that it is 99° F. With the atmosphere in the inclosure of the incubator at 99° F., the eggs do not get up to that temperature until about the tenth or eleventh day. It will vary with different breeds and may vary as much as twenty-four hours, depending upon the condition of the eggs at the time they are set and the breed. The temperature of the eggs on the eighteenth day [fol. 70] is approximately 100° F., although it may vary, depending upon the conditions, the strength of the air current, the amount of evaporation, and other things of that kind. Depending upon the type of incubator, the embryo within the egg will attain a maximum temperature as high as 104° F., some of them 103° F. I have seen them higher than that. I have seen them as high as 105° F. The statement in line 40 on page 1 of the Smith patent in suit "The temperature of circulating air should be such as will prevent the eggs in the early stage of incubation from falling below 100 degrees," refers to the temperature of the eggs. The temperature of the air in the incubator would have to be higher than 99° F. to attain that condition. I do not think I recently testified before Judge Geiger in Milwaukee that it would have to be 102° F. I think my testimony there was to this extent: That apparently nobody recognized the fact that the temperature of the eggs went down as low as it does at the early stages of incubation because I cannot find any literature on that at all. The temperature of the incubators at the date of this patent was considered 100° F. As we have increased the humidity, changed the humidity, we have also changed the temperature so that at the present time in the Smith we recommend a temperature of 99° F. in the air and a wet bulb reading that varies from 85° to 90° F. depending upon the time, and those things make it possible to operate at lower temperatures than we formerly thought was possible. In accordance with my tests, experiments, and long experience, it would be necessary to maintain the air in a Smith incubator at at least [fol. 71] 100-½° F., perhaps 100-¾° F. to maintain the

eggs in the early stage at not less than 100° F. I have never conducted an experiment in which we kept the early eggs at 100° F., but in my experience I would state it would be at least 100-½°, perhaps 100-¾° F. I have stated before that since this patent came out, we have changed our methods of humidity and found that we could carry more humidity and when we carry more humidity we have changed our temperatures of operating and with increased humidity we operated at lower temperatures, and we began to do that about the time I took charge of the experimental work. I never conducted an experiment to determine what was the effect of maintaining such a temperature in the Smith incubator that the eggs did not fall below 100° F., as described in the patent, during the early stage, say the first ten days. I do not know just what you mean by your inquiry as to whether or not I was the inventor of the present method of hatching which is promulgated to the trade as the Smith patent. In 1928 we discovered that it was possible to maintain the humidity very much higher than we had been maintaining it in the past, and with that humidity we had to be careful to keep the temperature at 99° F. We had recommended it before that, as much as four or five years, but the success was not proved to its present state until after we increased the humidity. The humidity was discovered about ten years after the Smith patent issued. The method of hatching now recommended to Smith users is different from that shown in the Smith patent in that respect. With our present knowledge and [fol. 72] present humidity, if you subjected eggs to such a temperature of air that they do not fall below 100° F. in the early stage or first ten days, it would be fatal to practically all of the eggs. That was my discovery. In the Waxham case I testified that "Even with the proper humidity, 99-¼°, it is too hot for a Smith incubator." The scientific facts were not known at the time the Smith patent issued and it was then generally supposed that the temperature of the air at 100° F. would keep the eggs at 100° F. We have made discoveries since that time to show that the foregoing was not the scientific fact. The Buckeye incubators which were put out under the patent in 1917 and on up until almost the present time were operated at 100 degrees. The Smith which was a larger incubator, which held three to four times as many eggs, in that we have always recom-

mended a temperature of 99, and in the earlier stages it was hard to hold it down. In the early incubators it was hard to hold it down to those temperatures. It was hard to hold down in 1923. We first gave that information to Smith incubator users in 1923.

Redirect examination.

By Mr. Ely:

There is a definite relationship between humidity and temperature. As you increase the humidity you can lower the temperature. The increase of the humidity has been an improvement since the issuance of the Smith patent, and if you had less humidity your temperature would be higher. In our old practice we had a lower humidity and a slightly higher temperature. In smaller machines it would [fol. 73] perhaps be possible with a lower humidity to operate properly keeping the eggs at a temperature between 100° and 105° F., but I do not think it would be possible with as large a machine as we use. The temperature at 100° and 105° F., referred to in the Smith patent, is the temperature of the egg, of the embryo. This matter of increasing the humidity came along about 1928, and the Smith incubators had been in successful operation—as "Smith Incubators" —for approximately five years prior to that time. Buckeye incubators, which are licensed under the Smith patent, had been in successful operation for ten or eleven years before this improvement of increasing the humidity. Buckeye started manufacturing incubators under the Smith patent in 1917 and Smith started on the market with his incubators in the Summer or Fall of 1922. The discovery or improvement by increasing the humidity did not come along until about 1928. There had been a considerable question on that and the exact amount did not work out until about 1928.

"By the Court:

Q. I thought you said on cross examination that although Buckeye operated it at an egg temperature of 100° as early as 1917 or 1918, that Smith advised a 99° temperature as early as 1923?"

It was found that with more egg capacity and perhaps a little different air movement, we had to go lower. The

larger incubators operated at a different temperature. At that time we were using steam for humidity and our tem-
[fol. 74] perature was 99° F. The Buckeye was using moisture pans to evaporate for humidity and they were operating at a temperature of 100° F. and continued to do so with their small machines up to the present time. It was not until 1928 that the real high humidity was put into common use and was recommended. Some customers had been doing it partially prior to 1928, but it was not until 1928 that we raised the humidity to the point that we did. As a matter of fact, we had been operating at about a 35% relative humidity and some up as high as 45%. In 1928 we recommended that they go to 55% relative humidity except on hatching day when they would increase it to 70% relative humidity which was way higher than had been thought possible. The custom prior to 1928 was to set your thermostat at 99° but if the animal heat carried it on up, not to worry about it if it did not go over a hundred. When we put out a relative humidity with a higher point, then we had to give them definite instructions not to let it go above 99¼° F. They set it at 99° and kept it there or as near as they could.

Recross-examination.

By Mr. Paige:

I did not testify before Judge Geiger to the effect that you had to increase the humidity when you raised the temperature and that it required more humidity in the atmosphere at 100° F. than it did at 99° F. I am certain that you increase the humidity as you lower the temperature. If you endeavor to carry out the instructions of the Smith patent by having the temperature in the incubator high enough, in ex-
[fol. 75] cess of 100° F. to insure that the eggs in the early stage would not fall below that temperature, the destructive effect of that high temperature upon the eggs would not be compensated for by increasing the humidity of that atmosphere at that high temperature. There would not be any way of helping that condition and you are dealing with a fact that was not known in 1917.

Redirect examination.

By Mr. Ely:

This matter of the temperature of the eggs and so forth which has just been discussed was raised in practically all of the other cases, including the Waxham and Snow cases.

DEFENDANTS' PROOFS

An opening statement was made by Counsel for Defendants, said Counsel stating that evidence would be adduced in this case which had not been before or considered by the Supreme Court.

MILO MILTON HASTINGS, called as a witness on behalf of Defendants, being first duly sworn, testified as follows:

Direct examination.

By Mr. Paige:

Defendants' Counsel asked the witness the following question:

"Q. Mr. Hastings, on May 3rd, 1911, an application, Serial No. 624,885, was filed in the United States Patent [fol. 76] Office for an Improvement in hatchery for the eggs of domestic fowl. That record includes these statements:

'My invention is that of a hatchery in which I secure better ventilation and a more uniform temperature throughout the hatching chamber by substituting a forced draft for gravity drafts.

'Ventilation I secure through cracks around the door of the hatching chamber or other small openings in any part of the air circuit. The air being constantly in motion requires less rejuvenation than dead air.

'The problem has been to enable the incubating operations to be carried on continuously, if so desired, with eggs at all stages of development, and with all of a vast number of eggs subjected to the same temperature and atmospheric conditions best adapted for the development of the embryo.

'In practice it is found that with vast numbers of eggs assembled in a single compartment and with eggs at all stages of incubation, but very little extraneous heat need be supplied because the eggs in the later stages of development supply the necessary heat for the eggs in the earlier stages of development. In practice, however, a source of heat is always maintained in order to permit of proper regulation.'

"That application was signed merely, 'Milo Hastings'. Do you know who that Milo Hastings was?"

[fol. 77] (The question was objected to on the ground that the best evidence should be the introduction of the application, that the application was abandoned and that the quotations do not appear in the application as filed. The objection was sustained and an exception noted.)

My present occupation is that of a writer. On May 3, 1911, I was in the employ of Mr. Walter B. Davis operating an incubator. At that time I filed an application for patent. Pages 258 to 295 inclusive of the Transcript of Record in the United States Circuit Court of Appeals for the Third Circuit in the case of The Buckeye Incubator Co. and Samuel B. Smith v. Cooley is a true photostatic copy of the file wrapper of that application for patent. The application was abandoned before the stage of appeal to the Commissioner. (That portion of the record which is comprised in pages 258 to 295 inclusive of the Transcript of Record in the United States Circuit Court of Appeals for the Third Circuit in the case of The Buckeye Incubator Co. and Samuel B. Smith v. Cooley, was offered in evidence as Defendants' Exhibit F. The offer was objected to by Counsel for Plaintiff on the ground that its admission in evidence was wholly immaterial to all issues of the case and on the ground that an abandoned application is not an anticipation or part of the prior art. In answer to the Court's query, Plaintiff's Counsel informed the Court that no objection was made on the ground that Defendants' Exhibit F was not certified. Counsel for Defendants informed the Court that Defendants' Exhibit F was not offered as an anticipation or part of the prior art, but as documentary evidence tending to corroborate the testimony of Defend-
[fol. 78] ants' witness. The Court reserved its ruling, and ruled as in its opinion on file.)

Before filing this application I put into practical use in Brooklyn, New York, the method of hatching which is described in that application and in the papers on record concerning it. This was done at Mr. Davis' poultry farm, Kings Highway, Brooklyn, New York. I built an incubator for Mr. Davis and was paid for building it and operating it for a time. The money which I received from Mr. Davis included the sale to him of the right to use that method of hatching. After I had built the incubator for him I operated that hatchery for him. This was about in the Spring of 1911. The building was in the Winter of 1911 probably mostly in the month of February. We started hatching in March and I left there sometime in May and the incubator was still in operation at the time I left. The method of hatching that I employed in the hatchery that I directed for Mr. Davis and concerning which I licensed him to use, consisted of placing the eggs in superimposed layers, many trays one above the other, circulating the air through that chamber by means of a fan, and operating to place the eggs in the chamber at frequent intervals. I would say the average interval was twice a week, and continuing in the same chamber to incubate the eggs in the various stages of incubation and to hatch them in the same chamber. The method of hatching was a success, which we demonstrated, by hatching in comparative tests with Cyphers' machine, which was then considered as the standard make. The hatches were equally as good in the new style machine as in the Cyphers' [fol. 79] machine manufactured by The Cyphers Incubator Company, a leading make of that machine.

About two months' continuous hatching was checked under my direction in this hatchery directed for Mr. Davis, with eggs put in as we received them, averaging about twice a week. I do not remember the exact number of hatches, but it would amount to a three weeks' period. Mr. Davis had a farm of his own and we were also buying eggs and it was continuous. Mr. Davis had laying hens on that poultry farm and he also bought eggs which he considered better for hatching. He put both eggs from the farm and eggs which he purchased in this incubator. It was a commercial operation of my method of hatching and was as successful as the previously used incubators that Mr. Davis had. I do not recall what was the percentage of the hatches but I think our comparative tests with the Cyphers machine was

about 59%. I wouldn't be sure of that exactly. We made a comparative test by dividing 1 lot of eggs and putting some in Cyphers machine and some in the machine I built. I would not be sure of it exactly but my memory is that the machines hatched about equally well and that the hatch was about 59%.

I left the employ of Mr. Davis in the latter part of May which was after I had filed this application for patent. In the incubator that I built for Mr. Davis there was a fan by which forcible circulation of air was effected. The air was artificially heated by a gas heater and the temperature controlled by both thermostatic and gas pressure regulators.

"Q. Of course, you have to have a door to get in and out [fol. 80] of that incubator. Do you recall what was the construction of that door?

"A. I do.

"Q. Did it permit the ingress of a restricted amount of air or not?

"A. It did.

"Q. Did that incubator have any means for letting the foul air out?

"A. It did.

"Q. Was that a wide opening or a restricted opening?

"A. A restricted opening.

"Q. I think you have clearly indicated that there was what is known in this art as staged incubation, by saying that you had the eggs put in there at intervals of twice a week.

"Mr. Ely: I don't recall that. Will you ask him the direct question, please.

"Q. Did you have staged incubation in that incubator?

"A. We did."

We practiced staged incubation in the incubator during the entire time we were operating it.

The Edgar Chambless whose name appears as a witness on my application was a personal friend to whom I disclosed my invention. He is still alive but I do not know his address. It was customary for Mr. Davis to have a good many visitors to his poultry farm.

I recall an advertising booklet entitled "Davis Poultry Farm" which I have before me. The booklet contains a

picture showing a large sign "Davis Poultry Farm. Fresh Eggs." The catalog states "Visitors Welcome".

I could not say whether the booklet was published during the time I was there or not. It was in use at that time, the pictures are all familiar, and I remember seeing that cata- [fol. 81] log in circulation and given out. The book correctly illustrates the layout of that Poultry Farm. On the eighth page of that booklet there is a photographic reproduction at the bottom, and the person at the left is a friend of mine by the name of Orvis, Editor of "The Poultry Digest" which was published in New York. I had previously explained my method of hatching to Mr. Orvis and he introduced me to Mr. Davis to give me an opportunity to contact Mr. Davis and to build an incubator.

(The advertising booklet entitled "Davis Poultry Farm", copyrighted 1911, was offered in evidence and objected to on the ground of immateriality. The Court reserved its ruling and stated that the same ruling should follow that the Court would make upon the admissibility of the application. Said advertising booklet was marked Defendants' Exhibit G for identification.)

The incubator and the method of hatching that I sold to Mr. Davis was in use when I left his employ.

Cross-examination.

By Mr. Ely:

This is not my first appearance in these Smith litigations. I appeared in person and testified before his Honor, Judge Bodine, in the Cooley case. I have never known the outcome of that case particularly, and know the outcome by general hearsay. My deposition was taken about two years ago in the cases of Smith v. Simms and Smith v. James. I have been informed that in the Simms case the patent was held valid and infringed notwithstanding my testimony. [fol. 82] I also testified in Minneapolis within the last two or three months before Judge Molyneaux. The testimony does not cover all the same ground, although I testified in all those cases regarding my prior use. I presume that I am being paid for my time to come here and testify and I was paid for going to Minneapolis and in the cases involving the Simms, James, and Cooley defendants. That is about the most money I ever made out of this thing.

In the application as filed in the Patent Office, which has been offered here in evidence, there is nothing about staged incubation in the application which was signed and executed by me on the 15th day of April, 1911, which was while I was operating the Davis incubator, and after the incubator was built. The application was filed without legal advice and there is no disclosure of staged incubation in that application as I signed it in April, 1911. I prepared and filed the application myself.

The drawing of the application shows dotted lines which are lettered E and E and described as pieces of fabric on either side that inclosed the egg chamber, and the fan is outside. In one of the previous cases I probably testified that the fabric cut down the flow of air in the egg chamber, and this is a fact as I remember. The incubator which I built in 1911, at Mr. Davis' place had a capacity of 6,000 eggs. We never operated full capacity. I do not remember the number we operated. We never had it full. I recall testifying in the case of Smith v. James and Smith v. Simms that the hatcher was built for 6,000 eggs but that there was no need to operate at the time because we were not en-

[fol. 83] gaged in the hatching business but only running a private poultry farm. That at no time while I was there was the hatcher run to capacity and, in fact, it was never run to more than one-third capacity.

I left Mr. Davis' place while the hatching season was going on. I was present when Mr. Davis testified in the Cooley case and recall that Mr. Davis testified that the hatcher was wrecked but not immediately upon my leaving. I do not recall testimony that it was wrecked and was not used during the succeeding hatching season.

I recall that when I left Mr. Davis, I prepared a booklet, thinking I was going to capitalize on this idea of mine, but I do not recall whether the booklet had any stock selling ideas or some description of the machine. I do not recall the exact wording in the booklet but there was something in it about having run a hatchery of 15,000 egg capacity at Mr. Davis' plant. I am the person referred to as the first person in the statement, "In the season of 1910-1911 I built and operated a 15,000 egg single compartment hatchery on the poultry farm of W. B. Davis in the suburb of Brooklyn. This demonstration was a complete success as the follow-

ing letter will testify," appearing on page 252 of the record in the Cooley case. This is a publication which I got out, and the statement therein that I had run a hatchery of 15,000 egg capacity during 1910-1911 is an exaggeration and was not true.

Mr. Davis had a very large house and part of that house was used for operations in connection with the poultry farm. The incubator was in the cellar of the house shown on the fourth page of the booklet and not in any of the [fol. 84] other buildings shown. My incubator was built in the same cellar of the same house where Mr. Davis had his other incubators. I think that it is correct that I testified in the Simms and James cases that I did not operate this thing as a public use but kept it secret because my application for patent had not yet been filed.

In about the year 1917, I went out to Ohio and was employed by a man by the name of Hoppel to build an incubator for him. My answer to your question as to whether or not I recall testifying, "I tried out a method of hatching there very much more like the Smith Buckeye device than I had used in the past" on page 121 of the Cooley Record, speaking of the Hoppel operations in 1917-18, is that I remember so testifying that the fan was used for the circulation of air. I remember testifying in the case of Smith v. James, on page 113 of the Record, as follows:

"As a matter of fact, this use at the Davis Hatchery was not a public use, was it, it was kept secret?

"A. It was in the residence of Mr. Davis, in the cellar. He was hatching for himself alone, or I was hatching for him, his employee, and it was not public in the sense that we had public customers or any bids made to the outside customers to come and visit the hatchery, but Mr. Davis' friends and mine were shown the hatchery."

"Q. And you kept it secret because you hadn't filed a patent application at that time, isn't that correct?

"A. I think that was my impression at that time, of not wanting the general public in, yes."

[fol. 85] I do not recall any written agreement with Mr. Davis. I was employed by Mr. Davis and paid wages for my labor to build an incubator, a hatchery with material which he purchased, on his place, and to stay there and

operate it, and therefore his employee to operate it, and being that this was a new invention of mine, it was understood that in building this for him I gave him the right to operate the machine I built for him. When read with the context, I remember testifying as follows in the case of Smith v. James on page 102 of the Record: "I do not remember the details of the time we set these eggs because it was of no importance to the principle of incubation, but merely a matter of convenience in handling the eggs and taking off the chicks."

Mr. Davis continued in the poultry business for a time after I left. There are no contemporaneous drawings in existence at the present time of the incubator which I built at the Davis place. There are photographs but not drawings. No part of that incubator is in existence today and has not been in existence since about 1912 or 1913.

Redirect examination.

By Mr. Paige:

I was twenty-seven years old when my application for patent was filed. I prepared the application myself and had had no experience whatever in preparing applications for patent.

[fol. 86] Walter B. Davis, called as a witness on behalf of Defendants, being duly sworn, testified as follows:

Direct examination.

By Mr. Paige:

My present occupation is that of printer and linotypist. I printed and published about 2,000 copies of the booklet entitled "Davis Poultry Farm," which has been marked for identification as Defendants' Exhibit G. The booklet was printed and published in New York City, the type set in my plant, and the material was printed by Gibbons and Van Glink. The booklet was printed and published in 1911 and at that time I sent a copy on to be copy-righted. It states on the booklet that it was copyrighted in 1911. The booklet contains tree pictures of the buildings, chickens, and one thing or another that were on the farm at that

time. I lived in the building to which Mr. Ely referred as a house in his cross-examination of Mr. Hastings. We had four incubators in one large cellar room of the house and then I had one that Hastings built, making five incubators in the cellar of the house. In answer to your question as to how I came to build the fifth incubator, Mr. Francis Orvis, head of "The Poultry Digest," introduced Mr. Hastings to me and Mr. Hastings said that he would build an incubator which would supplant all the Cyphers stuff. We had not had very good luck with the Cyphers so we were very glad to try another brand and we did. Mr. Orvis' picture is shown at page 8 of the booklet entitled "Davis Poultry Farm."

There were plenty of other visitors to the farm while I [fol. 87] had it, and it was my practice to extend a welcome to visitors. I absolutely welcomed hundreds of them—thousands. Although we had there approximately 5,000 hens, we only used a few of our own eggs in the incubators. I got most of the eggs for the incubators from a Mr. George Howard, of Bound Brook, New Jersey. He shipped them to me about twice a week, one or two crates as he may have had them. He had a superior brand of eggs.

Mr. Hastings built his incubator out of wood and cork. Various other things were used in the construction, including a gas heater, an electric fan, two governors were installed—I remember that thoroughly—one was a linotype governor to control the gas. It was a mercury-controlled governor, as used on a linotype casting machine, and when it got hot enough the heat shut it off automatically. Mr. Hastings had a thermostatic control also, but I insisted he make sure to put on the linotype governor, which controlled the heat to a very fine degree. Mr. Hastings installed a thermostatic control that controlled the heat from the gas burner when he built the incubator. The gas burner heated a large tin hood and in some way this heat was pushed into the cellar. This large tin hood heated the air that went into the incubator and was attached to the side and cut into the wood. It was set in there and the gas funnel was there and the inside connection in it in order that the heat may drift in. We had a fan to circulate the air. It kept it circulating so that the top of the box and the lower part of the box were the same. We had a thermometer at the bottom, another at the center, about six or eight thermometers al-

[fol. 88] together, and in that way we positively determined that the temperature was the same throughout the incubator. We used Cyphers thermometers that were marked at 102-½° F. and the temperature we had in that incubator was 102-½° F. My impression is that after Mr. Hastings left my employes were also instructed to keep the heat at 102-½°. That was also the temperature at which it was intended that the Cyphers incubators should be used.

By my arrangement with Mr. Hastings, it was clearly understood that everything that went into the incubator in the basement belonged to me absolutely. I paid him his wages and bought the material which he used to construct it. I absolutely paid him what was agreed upon. I did not make any separate payment for the use of his method of hatching and the entire thing came to me as my own property. It was my understanding that what I paid Mr. Hastings covered both the construction of this incubator and the privilege of using his method of hatching. I continued to use the incubator and method of hatching after Mr. Hastings left my employ. Eggs were placed in the incubator in trays. The trays were one above the other—deep trays. We did not have enough eggs to put in the machine at one time. We put in the eggs about twice a week as we could get them from Mr. Howard and a few from my own hens.

"Q. You put them in twice a week?
"A. At least."

My orders and agreements with Mr. Howard were that he was to ship me as many as he could at different times from the very fine hens. Some days we would get one crate, [fol. 89] some days we would get two or three crates, and he continued to do that for the entire period. Mr. Hastings built the incubator and he operated it there two or three months. In December and by January of 1911 he began and did construct the incubator. He left my employ within about five or six months after he entered it.

Mr. Hastings told me that he had filed an application for patent but I had nothing to do with it and he never showed me the application. While he was in my employ he told me that he had made the application but I never saw it. While Mr. Hastings was in my employ he had a writing room and he had various business. I was not there all the time. I was in the city a great deal of the time, and Mr.

Hastings was his own boss, so to speak. I did not overlook him carefully at all. My principal business was linotypist and in my establishment I operated eight linotype machines day and night and I employed thirty people in 1910, 1911, 1912, and 1913.

"Q. Was this incubator used under your direction and this method of hatching under your direction after Mr. Hastings left?

"A. Oh, yes."

We had the incubator in the cellar of the house until December of 1913 when I abandoned the farm, and I then removed everything from the cellar. I leased, did not own, the farm. When other things took up all spare cash and I lost quite a lot of money in the aviation business I thought I would close up all outside places and get back to the linotype business. I lost all my money in an investment in the aviation business at that time and as a result I had to dispense with the farm. Before we turned back this rented property to the owner, I completely cleaned out the cellar, [fol. 90] the incubators in the cellar. My nephew actually did the physical work.

Other people besides Mr. Francis Orvis came there and saw this incubator and the method of hatching while I had it going. A great many people came down who were my guests on Sunday. We had quite a party every Sunday. The number of people would run into many hundreds—perhaps a couple of thousand. Sometime there would be as many as 200 guests on a Sunday. I remember one Sunday I slaughtered over 200 chickens to feed them. There were about 78 people at one table alone. We had four dining rooms and then we had something over.

Cross-examination.

By Mr. Ely:

I was called to attend in New Jersey in the case of Smith v. Cooley, but I do not remember a very great deal of the testimony. I never saw my testimony printed or anything and I do not even know the disposition of the case. Mr. Paige did not show me the printed testimony before I went on the stand today and I did not know it was in print until you mentioned it. It was probably in 1926 that I testified

in the case but I do not remember. When I cleaned out the farm I did not destroy the Cyphers incubators but took them out and carried them off by truck. The Hastings incubator was a large thing and it had to be destroyed. I do not recall anything about burning it, and I instructed my nephew to remove it. I do not remember testifying: "Everything was knocked to pieces and put out in the back yard and burned up" but I do recall that I instructed my [fol. 91] nephew to destroy the incubator and remove it. I did not see it burned. I wasn't there. I insist that I instructed my nephew to take it out. I don't recall that testimony that you say is there. Maybe I did. In the copy of my testimony in the Cooley case which you hand me I see the statement "Everything was knocked to pieces and put out in the back yard and burned up along with a bunch of other trash."

Redirect examination.

By Mr. Paige:

The Cyphers incubators were 300 egg capacity incubators and were quite portable, so that you could pick them up and move them out. The incubator built by Hastings was a very large affair and we could not take it out without destroying it.

Recross-examination.

By Mr. Ely:

I instructed my nephew to remove the stuff from the cellar and clean up the cellar generally. I discontinued the poultry business in 1913 and I do not know if another incubator was ever built like it as I did not go into any other plant.

Isabel E. Davis, called as a witness on behalf of Defendants, being first duly sworn, testified as follows:

Direct examination.

By Mr. Paige:

I am the wife of Walter B. Davis, and I recall the booklet which you hand me which is entitled "Davis Poultry Farm"

[fol. 92] and which is marked for identification as Defendants' Exhibit G. I know there were a good many copies of the booklet published and I recognize all of the reproductions of photographs in the booklet. I know that Mr. Davis made an agreement with Mr. Hastings in the Winter at the beginning of 1911 about the putting up of an incubator at the Davis Poultry Farm. I saw the incubator many times and it was located in the cellar of the farmhouse where there were other incubators. I know they made tests as to the comparative merits of the old incubators and the new incubator but I was not there when they made the tests. Mr. Hastings was in Mr. Davis' employ in making this incubator and supervising its operation less than a year. I do not remember any more definite time as I did not pay much attention. I was a bookkeeper and cashier in Mr. Davis' linotype place in New York City and all bills were paid through me. I remember that monthly payments were made by Mr. Davis to Mr. Hastings. As I recall it, we paid him a certain amount each month and his living expenses were allowed, and we paid for all material. The bills were paid through my office. I think that Mr. Davis paid Mr. Hastings a bonus when he left, but I have forgotten and do not remember. The incubator was used by Mr. Davis after Mr. Hastings left and was operated by a manager we had down there by the name of Miller. I do not know how long he ran it after Mr. Hastings left. In answer to your inquiry:

"Q. Do you remember what was the nature, what was the method of hatching in there; how the eggs were placed in that incubator?

[fol. 93] "A. Well, I was in the incubator several times. They seemed to be in all stages on tiers—shelves.

"Q. Shelves one above the other?

"A. Shelves one above the other, from eggs to chicks.

"Q. Some had eggs in there and some had chicks?

"A. Yes.

"Q. That is what they call in this case staged incubation. About how often were fresh eggs put in that incubator, do you recall?

"A. At least twice a week.

"The Court: Are you testifying from what you personally observed?

"The Witness: Yes, personally.

"The Court: I thought you were in the office?

"The Witness: Well, I went down every week to check up.

"The Court: Did you go down twice a week?

"The Witness: No, but I know how the eggs came in from Bound Brook."

I kept the books for the hatcher business, as well as for the linotype business and kept track of the receipt of the eggs. I know Mr. Davis gave up the poultry farm because he had lost so much money we could not keep it, but I have forgotten when that was.

(No cross-examination.)

[fol. 94] Milo Milton Hastings, recalled as a witness on behalf of Defendants, being previously duly sworn, testified as follows:

Cross-examination.

By Mr. Ely:

I quite obviously furnished information, furnished something probably, for the article in the Boston Sunday Globe of November 10, 1912, reproduced in the Cooley Record which you hand me. I do not know where the writer of the article got the information for the statement in the article "Finally in the winter 1910-1911, a small plant was constructed on the Davis Poultry Farm in Brooklyn, New York, and the idea fully demonstrated. This plant was not open to the public as its workmanship was crude and the applications to the Patent Office not completed." I probably furnished many previous clippings. There was much publicity at that time.

I cannot remember this individual or what I furnished him individually. There was much publication at that date.

I do not recall that I testified that I furnished the information on which this article was published in the Boston Sunday Globe.

I remember testifying in the case of Smith v. James in answer to the question on page 174 of the Record:

"And you have always been motivated, have you not, by a comparison of the success which Dr. Smith obtained and the failures you obtained?

"A. I think it natural that an original inventor, a man [fol. 95] who believed himself to be the original inventor of a basic principle, which another man later develops and attempts to monopolize, would feel some element of resentment that he did not share in such return."

ALMON B. HALL, called as a witness on behalf of Defendants, being first duly sworn, testified as follows:

Direct examination.

By Mr. Paige:

The temperature of the atmosphere in the incubators we used during the incubation process is 99° F. The percentage of moisture in that incubator is from 35 to 45%. The temperature of the atmosphere in the separate hatchers is 98° F. The percentage of moisture in the separate hatcher is from 65 to 80%. Since the Fall of 1930 we have entirely used the system of keeping the eggs in the incubators for eighteen days and then transferring the eggs to the separate hatchers. Since the Fall of 1930 we have not conducted a method of hatching in a single chamber in which there is staged incubation and in which the eggs are hatched. The advantage in the method which we have been employing for the last few years, over the method employed before, is that we can control the temperature in the incubator at a different degree than we do the temperature of the separate hatcher. This is also true of the percentage of moisture and is an advantage. It is also an advantage [fol. 96] as we get better hatches. I would say that we get from 2 to 5% increase of hatches by using the combination of incubator and separate hatcher, as distinguished from the other. The highest percentage of eggs set that we have had hatched would be between 85 and 90%. I never used Smith incubators.

We made a test to determine what would happen to eggs in a closed chamber, otherwise like our ordinary practice

except that we ran the temperature of the atmosphere in that incubating chamber at 102° F. with the result that of 50 eggs in the test, we hatched two chicks on the 18th day. That is all that came out. Some of them broke the shell, but were not able to get out—possibly a half dozen. In other words, our percentage of hatch was 4% as distinguished from 85 to 90% in our ordinary method of hatching.

We operate our incubators at 99° F. and in the Robbins machine 99¼° F. would not damage the eggs completely. It might cut down the percentage and quality of the chicks. By quality I mean the chicks would be dried out, and would be smaller. They debilitate.

Cross-examination.

By Mr. Ely:

A 5% hatch would be a substantial improvement. When we went from 70 to 75% that was a substantial improvement in hatching. I recall in the letter of June 15, 1931, I said, referring to those separate hatchers: "We feel that we have obtained slightly better hatches and greater uniformity than were possible with this new equipment."

[fol. 97] ORDER APPROVING NARRATIVE STATEMENT OF THE EVIDENCE

The foregoing narrative statement of the evidence is hereby allowed and approved, and the same is hereby ordered filed as a statement of the evidence to be included in the Record on appeal in the above styled cause, as provided in paragraph (b) of Equity Rule 75.

Carroll C. Hincks, U. S. D. J.

Dated September 4, 1935, New Haven, Conn.

[fol. 98] PLAINTIFF'S EXHIBIT No. 18.

JOSEPH J. TAGGART, was called as a witness on behalf of the defendants, and having been duly sworn, testified as follows:

By the Clerk:

Q. 1. What is your full name?
A. Joseph J. Taggart.
Q. 2. Where do you live?
A. Cleveland, Ohio.

Direct examination.

By Mr. Toulmin:

Q. 3. You have just given your name, Mr. Taggart?
A. Yes, sir.
Q. 4. And your residence?
A. Cleveland, Ohio.
Q. 5. What is your occupation?
A. I am Service Man for the Smith Incubator Company.
Q. 6. Of which Dr. Smith is President?
A. Yes, sir.
Q. 7. Dr. Smith, the patentee, in this litigation?
A. Yes, sir.
Q. 8. And the plaintiff here?
A. Yes, sir.
Q. 9. You represent Dr. Smith as plaintiff here in this Court, and you came with Mr. Ely, did you not?
A. Yes, sir.
Q. 10. You are familiar, are you not, with the Buckeye Incubator Company of Springfield, Ohio, as the exclusive licensee having the exclusive right to make and sell and/or use all incubators up to 16,500 egg capacity?
A. Yes, sir.
Q. 11. And you are familiar with the exclusive license arrangement with the Buckeye Incubator Company, that Dr. Smith has agreed not to sell, make or use incubators up to 25,000 egg capacity?
A. Yes, sir.
[fol. 99] Q. 12. By the way, what are the egg capacities of the defendants' individual units for incubator and hatcher, at present out here in support of your affidavit?

A. 26,000 Model 26-I which hatches 26,000 and some eggs.

Q. 13. Do you refer to more than 26-I or only 26-I?

A. I refer to 26-I, and I have also seen larger hatcher units and other machines.

Q. 14. These other models, 23 and 17, are 17,000?

A. Model 23,528.

Q. 15. And 17 is 17,000 approximately?

A. That given by the catalogue. I am not sure of the exact numbers.

Q. 16. That is approximately?

A. Yes, sir.

Q. 17. Are you familiar, Mr. Taggart, with the license contracts that exist between the Buckeye Incubator Company and Dr. Smith?

A. Yes, sir.

Q. 18. I hand you what is dated as a contract on 29th of April, 1927, and will ask you if that is the 1927 contract of license of the Smith patent in suit, that exists between the Buckeye Incubator Company and Dr. Smith?

A. That is not a photostatic copy, it is typewritten. It appears to be a copy of the contract.

Mr. Toulmin: We offer that to be marked in evidence as Defendants' Exhibit A.

(Received in evidence and marked "Defendants' Exhibit A".)

The Court: It is not fully identified; I suppose we can accept it subject to verification.

Mr. Toulmin: I think we can, your Honor. I think there is no denial about the contract.

[fol. 100] The Court: I assume it is a fair copy, without comparison?

Mr. Toulmin: Yes, sir.

The Court: Unless called to my attention——

Mr. Toulmin: Yes, sir.

Q. 19. I will hand you supplement agreement made at a later date in 1923 between Dr. Smith and the Buckeye Incubator Company, referring to the 1927 agreement; do you recall that one?

A. This likewise is a typewritten instrument. It is not a photostatic copy. It is not signed. There is no signature. I could not identify it.

Q. 20. You know there is some such contract, do you not?

A. I know there is a contract about that time, yes, sir.

Q. 21. And it referred back to the 1927 contract, did it not?

A. Yes, sir.

Q. 22. And you can advise the Court without doubt that there is existing today an exclusive license under the Smith patent in suit, as described heretofore—as to the patent, is that correct?

A. Yes, sir. The Buckeye Incubator Company was given exclusive license on the lower sizes, and Smith retained the upper sizes, and Smith retained, according to the contract——

Q. 23. And that exclusive license agreement or agreements, are in existence today, are they not, Mr. Taggart?

A. Yes, sir.

Mr. Toulmin: I ask this be marked Defendants' Exhibit B. I think these contracts are unnecessary in view of the witness' admissions of title.

(Received in evidence and marked "Defendants' Exhibit B".)

[fol. 101] Cross-examination.

By Mr. Ely:

X Q. 24. Mr. Taggart, are you familiar wherein the legal title of the patent resides?

A. Dr. Smith.

X Q. 25. And Dr. Smith is connected with the Smith Incubator Company, and is manufacturing incubators of the larger sizes, is not that so?

A. Yes, sir.

X Q. 26. He manufactures from 20,000 on up?

A. Yes, sir.

X Q. 27. And the 26-I, which you say has about 26,000 egg capacity, within whose field does that fall?

A. Dr. Smith's.

X Q. 28. And the 17,000 and the 17 and 23-I, 17,000 and 23,000 eggs approximately, in what field does that fall?

A. Falls between Buckeye and Smith; Buckeye has no right under that at all.

X Q. 29. And the duty of pursuing infringers under the patent, rests in whom?

A. Dr. Smith.

X Q. 30. And who gets the recoveries?

A. Dr. Smith.

X Q. 31. Do you know that these things that you are testifying to, are facts within your own knowledge?

A. Yes, sir.

X Q. 32. Therefore, the particular incubators which are involved in this case, do not fall within the field which has been licensed to Buckeye?

A. That is correct.

X Q. 33. And Buckeye has only the exclusive license to the incubators of 16,500 and less?

A. Yes, sir, that is all.

Redirect examination.

By Mr. Toulmin:

R. D. Q. 34. As a matter of fact, Mr. Taggart, Dr. Smith does not do any manufacturing, using or selling, himself, at [fol. 102] all; is that correct?

A. He does do all or a great deal of the organization.

R. D. Q. 35. He does not do it himself?

A. In which he owns all the stock.

R. D. Q. 36. He does not do it himself, does he?

A. I think he manufactures personally.

R. D. Q. 37. Does he now manufacture and sell personally, or only through a corporation?

A. I am not real sure of the exact set-up of that. He manufactures himself and has a selling organization, which is the Smith Incubator Company.

R. D. Q. 38. Has he any manufacturing corporation?

A. You have got me. I do not know.

Mr. Toulmin: That is all.

Recross-examination.

By Mr. Ely:

R. X Q. 39. You said something of the stock ownership of the Smith Incubator Company; do you know in whom that resides?

A. Dr. Smith personally, probably.

Mr. Toulmin: That is all. Your Honor, I have here an authority I did not have time to get in my brief. I only came into this case with the papers last Monday morning. I do not make that as an excuse, but I ask the Court's indulgence. There is a case in 11 Fed. (2), page- 214-216, by Judge Learned Hand, to the effect that this title question can be raised at any time, even after final decree. That is the authority referred to.

[fol. 103] So much for those two questions. I now would like to call Mr. Hall on the stand on the question of the facts. Mr. Hall, will you take the stand, please.

Almon B. Hall, was called as a witness on behalf of the defendants, and being first duly sworn, testified as follows:

Direct examination.

By Mr. Toulmin:

Q. 1. Where do you reside?
A. Wallingford, Connecticut.
Q. 2. Mr. Hall, you are one of the defendants in this case?
A. Yes.
Q. 3. You live here, that is, in this community?
A. Wallingford.
Q. 4. And how long have you lived there?
A. 43 years.
Q. 5. And what is your occupation?
A. Poultry raiser and hatching chicks.
Q. 6. And what make of incubator are you now using?
A. Robbins Electric Incubator.
Q. 7. Are you practicing separating hatching or you are not practicing, what is the situation?
A. We are using separate hatching entirely.
Q. 8. How long have you been using separate hatching entirely?
A. Since January, 1931.
Q. 9. That is when you first started using separate hatchers?
A. Yes. January, 1931, is the first one of the separate hatchers we put in.

Q. 10. Did you immediately start at that time to practice separate hatching exclusively, or did you come to it at a later time?

A. We came to it in about September, 1931.

[fol. 104] Q. 11. Since September, 1931, have you practiced anything other than separate hatching?

A. No.

Q. 12. Prior to adopting separate hatching, had you used any Robbins machines that did not have the separate hatcher?

A. Yes.

Q. 13. Will you tell the Court now as to the separate hatcher, just what is the separate hatcher procedure, the construction of it, so that the Court will get first hand from you what this case is all about. Just turn and tell the Court.

A. The eggs are incubated in the incubating compartments for 18 days, and then they are transferred to separate trays into an entirely separate machine with separate parts, and they are carried there at three days until they are entirely hatched.

The reason for doing that is both economical and sanitary. We get better results in doing that for the reason that in the incubating machine we run a temperature of approximately 99½ degrees, and the humidity of 35 to 50 per cent. In the second hatcher we run a temperature of 98 degrees and humidity of around 80. These are conditions which are more desirable for eggs of the different stages of incubation, and it results in a different quality of chicks and a higher percentage of hatch.

For sanitary reasons we can after every hatch clean out the separate hatchers and all the dirt from the hatching, because in the separate hatcher there is no dust or shells or dirt in the incubator, and it is very essential that proper sanitation be carried on in connection with the hatchers, and that was the reason for hatching under those conditions, and the reason that all practical machines operate [fol. 105] and hatch in separate compartments.

Q. 14. Will you tell the Court what is the reason for this extraordinary precaution of the sanitation, as to why you use the separate hatcher for that purpose?

A. The main reason is for Pulorum disease, such as is transmitted from the breeding of the egg to the chick, and

there should not be any of that disease in one hatch, and the fact that you do not completely eliminate the dirt between the hatches, and that eliminates the chances of carrying it over into another hatch. Then, there are certain fungus diseases that can be established in a machine that would carry over from one hatch to another, and that is entirely eliminated by this process.

Q. 15. In the incubator portion of this hatcher incubator combination, in the incubator box, do you move the eggs at any time from the time you first place them in the cabinet until you remove them about the 18th day?

A. We have them out once and test out the infertile eggs, about the 7th day.

Q. 16. Do you change the position of the eggs after you take out the poor ones?

A. No, we do not change them.

Q. 17. Then, at the end of the 18th day, where do you place these eggs in the trays?

A. They are transferred to the hatching tray and from that into the separate hatching compartment.

Q. 18. About how long does it take to do that?

A. It takes possibly three or four minutes to remove the trays from the incubator and then the process of transferring them from one type of tray to the other, and that takes 20 to 25 minutes for the 26 machines.

[fol. 106] Q. 19. During that period are the doors of the incubator open or closed?

A. They are open for about two or three minutes.

Q. 20. And during that period the eggs that are being placed on the rack which is to be conveyed over to the separate hatcher, are those eggs in the open room or in a special heating compartment?

A. They are in a cabinet, and they are not exposed entirely to the room temperature.

Q. 21. And where is this compartment located with respect to the incubator and the hatcher?

A. It is on casters that are moved from one machine to the other.

Q. 22. It is an open frame-work for supporting the trays?

A. That is right.

Q. 23. And during the period of 20 to 30 minutes, as the trays and eggs are being put on this wheel rack, the eggs the subjected to the room temperature?

A. Partially.

Q. 24. Did you adopt this separate hatcher combination by reason of this patent infringement suit?

A. No.

Q. 25. What were the sole reasons that you adopted the separate hatcher combination?

A. For the production of a higher quality chick and getting a higher percentage of hatch and eliminating disease and make complete sanitation possible.

Q. 26. Mr. Hall, in the hatcher itself, do you have eggs of more than one age?

A. No.

Q. 27. They are just eggs of one age only in the hatcher?

A. That is right.

Q. 28. And the conditions of temperature and moisture are different, I believe you testified, in the hatcher as compared with the conditions of temperature and moisture in the incubator?

A. That is right.

[fol. 107] Q. 29. What is the reason for the differences in the temperature and moisture in the incubator with respect to the hatcher?

A. The eggs in the incubator require a higher temperature and a lower moisture as compared with the hatcher. A hatcher requires high moisture and lower temperature.

Q. 30. Why is that, Mr. Hall?

A. It results in a more normal condition of the hatch. We get a better quality chick and slightly higher percentage of hatch.

Q. 31. That is based on your experience out here at your plant?

A. Yes.

Q. 32. You say a better quality of chick and higher hatch as compared with what machines?

A. In the machine in which the chicks were hatching in the same compartment as being incubated.

Q. 33. Of the type you had formerly before you adopted the separate hatcher?

A. Yes.

Q. 34. Do your men go inside the compartment either of the hatcher or incubator when they are moving the eggs?

Mr. Ely: I object to that as immaterial.

Mr. Toulmin: I think it is quite material.

Mr. Ely: The Supreme Court has held that 23 was an infringement, and they did not go into that either. I do not see any reason for dragging this thing all through again. The Supreme Court has spoken as to No. 23.

Mr. Toulmin: Never on the separate hatcher.

Mr. Ely: This has nothing to do with the separate hatcher.

[fol. 108] Mr. Toulmin: It has everything to do with the separate hatcher.

The Court: Will you read the question.

(Last question repeated as recorded.)

The Court: I think that the defendant is entitled to show his practice. Admitted.

A. No, they do not.

By Mr. Toulmin:

Q. 35. Mr. Hall, will you state to the Court whether you have in contemplation any changes in your machines or the sales of the machines or movement of the machines out of the jurisdiction of this Court?

A. Not a thing.

Q. 36. Will you tell the Court briefly something about your financial worth and financial responsibility?

A. We have been in business for 24 years and our present assets as of November 30th, are $244,731.19. We have current assets at that time of $124,679.09. We had current liabilities of $57,559.87.

Q. 37. Your condition today is substantially shown by those figures?

A. I think so.

Mr. Toulmin: That is all. You may have the witness.

The Court: Those figures lead to a net worth of what, if you have it computed?

Mr. Ely: No bond has been posted, your Honor, and I call your attention to that.

The Court: You gave aggregate assets of $244,000 and liabilities of fifty some thousand plus?

The Witness: Yes, I have those figures here.

[fol. 109] The Court: Were those current liabilities only?

The Witness: Current liabilities, yes.

The Court: Have you any aggregate liabilities to correspond with the aggregate assets?

The Witness: The total net worth, $140,670.15.

Cross-examination.

By Mr. Ely:

X Q. 38. Your concern is not a corporation, is it?

A. No.

X Q. 39. Just two brothers?

A. Yes.

X Q. 40. What is the other brother's name?

A. Louis C.

The Court: The figures you have given are the firm figures?

The Witness: Yes.

Mr. Ely: That is the assets of both of you?

The Court: That is the assets of the firm, as I understand it, disregarding your personal financial condition.

The Witness: Correct.

By Mr. Ely:

X Q. 41. Before you had these No. 26 incubators with the separate hatchers, Mr. Hall, you operated the Robbins 23, did you not?

A. Yes, sir.

X Q. 42. And you are familiar with that, of course, and with the operation of the Robbins 23?

A. Yes.

X Q. 43. How long did you operate those?

A. We operated those from September, 1929, was the first time.

X Q. 44. Up until when?

A. Up until about September, 1931.

[fol. 110] X Q. 45. That is the incubator you understand which was involved in what is known as the Waxham litigation, you understand that?

A. Yes.

X Q. 46. In that Robbins No. 23, you did not go into the incubator at any time?

A. No.

X Q. 47. That is to say, as far as the 26 and the 23 are concerned, they are the same in that respect?

A. Yes.

X Q. 48. And in operating the Robbins 23, you took the trays out of the incubating cabinet at the 18th day, you took them out into the atmosphere of the room at the time, so that you could retray them for the hatching of the chicks, is that so?

A. Yes.

X Q. 49. In that respect there is no difference between the Robbins 23 and your present practice?

A. In that respect only.

X Q. 50. In that respect there is no difference?

A. Only in that respect.

X Q. 51. Mr. Hall, in this Robbins 26 that you are now using, you have a large tilting drum in which the eggs are held from the first to the 18th day, is that not so?

A. Yes.

X Q. 52. And the Robbins 23 which was involved in the Supreme Court Opinion, had a large tilting drum in which the eggs were set from the first to the 18th day, is not that so?

A. Yes.

X Q. 53. And in that respect, the 23 and the 26 are not different?

A. In that respect only.

X Q. 54. You have had several "onlys" already, and I advise you to drop the word "only" for a moment. In the operating of the 23, you set the eggs at intervals of three days apart, did you not, in the tilting drums?

A. No, not necessarily.

X Q. 55. You set them at short intervals, short of the total 18 day period?

A. We set them two days a week.

[fol. 111] X Q. 56. That is, you would set them three and then four days, is that correct, your interval would be three and four days?

A. Yes.

X Q. 57. In your Robbins 26, how do you set your eggs?

A. We set them two days a week.

X Q. 58. The same as you did in the operation of your 23?

A. Yes.

X Q. 59. In that respect there is no difference between the 23 and the 26?

A. In that respect only.

X Q. 60. Again you say "only". In the Robbins 23, you had a fan or two fans at the back which propelled the air through the chamber, did you not?

A. Yes.

X Q. 61. And in the Robbins 26 you have one fan, is that correct, or two, which is it?

A. Two fans.

X Q. 62. And the space which was taken up by the Hatching racks of the 23 has now been taken up by increasing the size of the drums, so that you have a larger drum in the 26 than you had in the 23, is that right?

A. Yes.

X Q. 63. And when you were operating the Robbins 26 you had eggs in staged incubation, had you not?

A. We have them in certain stages.

X Q. 64. You have them in more than one stage in this tilting drum, is that correct?

A. Yes.

X Q. 65. And some of those eggs have just been put into the tilting drum and some have been in for a period of say from 15 to 18 days, is that not so?

A. Yes.

X Q. 66. And that is to say, as you understand it, some of those eggs are cold eggs and are absorbing heat, and some are giving off heat, is that so?

A. I assume so.

X Q. 67. You have no cause to dispute that statement [fol. 112] that the egg passes from the heat absorbing to the heat giving-off stage at the 11th day?

A. I do not know where the distinction is.

X Q. 68. That is to say, if you set all your eggs at one time in the 26 incubators, you would have them all reaching the heat generating stage at the same time, would you not?

A. Yes.

X Q. 69. And you would have them when you first started in all in the heat absorbing stage at the same time?

A. Yes.

X Q. 70. You have by your principle of operation of the 26, you have a balance or an attempt to balance those two properties of the eggs, you have some eggs that are absorbing and some that are heat generating in operating your 26?

A. I believe so.

X Q. 71. And there are small openings at the back of the fans to take in a certain amount of fresh air and there are small openings in the ceiling for the discharge of foul air, is not that so?

A. There are openings, but they are not necessarily used in that way.

X Q. 72. But you have openings for the interchange of air from the outside atmosphere to the interior of the incubator?

A. Yes.

The Court: Was that true both of the 23 and the 26?

The Witness: Yes, there are openings, but as a matter of practice only the openings in the back of the machine are regularly used.

The Court: You are speaking now of which model, both models?

The Witness: Both models.

[fol. 113] By Mr. Ely:

X Q. 73. There is no difference between the two models in that respect?

A. No.

X Q. 74. When did you first receive notice? Do you recall when you first received notice of infringement of the patent in suit?

A. No, I do not.

X Q. 75. Do you recall whether it was approximately in August of 1930 that you were first notified of infringement?

A. I do not recall.

X Q. 76. At the time you were first notified of infringement, you were using the Robbins 23's?

A. I do not recall.

X Q. 77. Do you recall that fact?

A. No.

X Q. 78. Do you not recall the fact that after you received the notice you switched over to the Robbins 26 after your first notice of infringement?

A. That is not true.

X Q. 79. That is not true?

A. No.

X Q. 80. When did you say you switched over from the 23 to the 26?

A. I do not recall receiving any notice.

X Q. 81. Will you answer my question, please?

A. We put in our first separate hatchers in 1931, early 1931.

X Q. 82. And you went over completely to the separate hatcher idea when?

A. In September, 1931.

X Q. 83. In regard to this matter of sanitation, are you familiar with the operation of the Smith Incubators as they are on the market now?

A. No.

The Court: Just a moment. I am not sure that it has [fol. 114] any importance, but I understand Mr. Hall to say on direct examination that the defendant began using the separate hatchers in January, 1931.

The Witness: That is correct.

The Court: And just now I understood you to say in August.

The Witness: You are mistaken.

The Court: You began using them in January?

The Witness: Yes, and we completed the change over in September, 1931.

By Mr. Ely:

X Q. 84. You are not familiar then with the fact that in the Smith incubator, the incubating department is cleaned up after every hatch and fumigated?

A. No.

X Q. 85. This matter of the B. W. D., which is Bacillary White Diarrhœa, which you referred to as Pulorum disease, that is contracted by the chick by breathing the down or infected down?

A. I do not know.

X Q. 86. You do not know that fact?

A. No.

Mr. Ely: That is all.

Mr. Toulmin: That is all.

(Witness excused.)

The Court: We will take a short recess.

(After a short recess.)

Mr. Ely: I wish to ask Mr. Hall another question.

[fol. 115] Almon B. Hall, resumed the stand.

By Mr. Ely:

X Q. 87. You gave the figures as to the assets of the firm. In those figures, to what extent have you included these incubators?

A. At their inventory value.

X Q. 88. What is that?

A. I could not say.

X Q. 89. You have included these incubators in your figures of the assets?

A. Certainly.

X Q. 90. Have you a statement showing how you arrive at those assets?

A. No.

X Q. 91. From what were you giving your figures?

A. From a bank balance sheet.

X Q. 92. And was that the amount that you gave the bank balance?

A. That is the bank balance statement. It is the bank statement.

X Q. 93. The statement to the bank that you made?

A. Yes.

X Q. 94. In which you listed your various assets, is that correct?

A. Not the various, but the total.

X Q. 95. You listed the items of your assets in this statement to the bank and that is what you have been testifying from, is that right?

A. They are not itemized.

X Q. 96. However, the incubators are included in your assets?

A. Yes.

X Q. 97. That you have given this morning?

A. Yes.

X Q. 98. What did those incubators cost you?

A. I could not say.

Mr. Ely: That is all.

(Witness excused.)

[fol. 116] DEFENDANTS' PROOFS—(Continued)

Mr. Toulmin: I am almost at the end of this proof, if you will indulge me just a moment.

Mr. Ely: Do I understand that I will have the opportunity to put a rebuttal witness on?

The Court: Surely.

Mr. Toulmin: I have some publications here on an important question, and one is on the embryology of the chick, and this 18 day, and the reason for transfer, and two others on the disease question. I have photostats of the pertinent pages that I would like to have in evidence.

Mr. Ely: I object to them. We have not been furnished copies of that.

Mr. Toulmin: You have had them before.

Mr. Ely: Not in this case.

The Court: Show them to counsel. He may waive his objection.

Mr. Toulmin: I have not had time to get additional copies, but I will get them.

Mr. Ely: All right.

Mr. Toulmin: We offer in evidence a photostat of the title page of the book "The Development of the Chick," by Frank R. Lillie, Professor in the University of Chicago, and photostats of pages 210, 211, 218, 219, 220, 221 and 232 as our Defendants' Exhibit C.

The Court: Is it objected to?

Mr. Ely: Yes. I object to that as immaterial.

[fol. 117] The Court: Do you waive any objection as to its competency?

Mr. Ely: They are publications that have to do apparently with some status of diseases, but I do not see what it has to do with the issues of this case. They have not been pleaded.

The Court: If they are offered in this form, what about the opportunity to cross-examine?

Mr. Toulmin: They are technical publications that are current in the trade.

Mr. Ely: The authors are not here, and I object to it for that additional reason.

The Court: They are surely not competent if the objection is pressed on that score.

Mr. Ely: I press the objection.

Mr. Toulmin: Then your Honor rules out the Exhibit C?

The Court: Do you wish to have it marked for identification?

Mr. Toulmin: Yes. It may be marked under the rule so that I will take an exception.

The Court: It is conceded, is it not, that the offers have not been previously brought to the attention of counsel?

Mr. Toulmin: Not in this particular case. They are quite standard publications and have been in these cases.

(The same was thereupon marked "Defendants' Exhibit C for Identification.")

Mr. Toulmin: I likewise offer as Exhibit D, to which the same set of circumstances will apply, the Agricultural Ex-
[fol. 118] periment Station Bulletin of the Kansas State Agricultural College, Technical Bulletin No. 21, of November, 1926, and the title page, and pages 3, 46, 47, 48 and 49.

Mr. Ely: Same objection.

The Court: Same ruling.

Mr. Toulmin: And the same tender and exception.

(The same was thereupon marked "Defendants' Exhibit D for Identification.")

Mr. Toulmin: We offer as Exhibit E the cover page of the Journal of American Veterinary Medical Association of February, 1926, and pages 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639 and 640 and 641 as the entire exhibit.

Mr. Ely: Same objection.

The Court: Same ruling.

Mr. Toulmin: Same exception.

(The same was thereupon marked "Defendants' Exhibit E for Identification.")

Mr. Toulmin: Your Honor, I am through with the fact proof that I have to offer in this matter. Does your Honor care to hear me on the argument of the facts?

The Court: I would rather close the evidence before proceeding on arguments. Has Mr. Ely any evidence?

Mr. Ely: Yes.

[fol. 119] PLAINTIFF'S REBUTTAL PROOFS

GEORGE MCCONNAUGHEY, was called as a witness in rebuttal on behalf of the plaintiff, and having been first duly sworn, testified as follows:

Direct examination.

By Mr. Ely:

Q. 1. Mr. McConnaughey, where do you reside?

A. Cleveland, Ohio.

Q. 2. Mr. McConnaughey, you are a practicing attorney admitted to the Bar in Ohio?

A. Yes, sir.

Q. 3. And your present position?

A. I am attorney for the plaintiff here.

Q. 4. And how long have you been Dr. Smith's attorney?

A. For eight years.

Q. 5. And in that capacity you have been familiar with a great deal of this litigation that has gone on with regard to the Smith patent?

A. I have.

Q. 6. Do you recall approximately the date that the Master handed down his Opinion holding the Robbins 23 Incubator to be an infringement of the Smith patent?

A. In 1930, June or July, 1930.

Q. 7. Following that decision did you notify various users of the Robbins machine of the decision and of their infringement thereof?

A. I did.

Q. 8. Did you notify this particular defendant, Hall Brothers?

A. I did.

Q. 9. At what time?

A. In August, 1930.

Q. 10. Then again there was a reopening of that case, you will recall, and it was decided again by the Master holding the patent valid and infringed; do you recall that?

A. Yes, sir.

[fol. 120] Q. 11. Following that decision on the reopening, did you again notify the various users of Robbins machines?

A. I did.

Q. 12. Including this defendant Hall Brothers?

A. I did.

Q. 13. And what was the date of that, do you recall?

A. That was in July of 1931.

Q. 14. Then you recall that the District Court affirmed the Master's holding that the Robbins Incubator was an infringement of the Smith patent and the Smith patent was valid, do you recall that?

A. Yes, sir.

Q. 15. What was the date of that?

A. July, 1932.

Q. 16. Following that did you notify the users of the Robbins machine including this particular defendant of its infringement?

A. I did.

Q. 17. Then you recall that the Circuit Court of Appeals of the Ninth Circuit affirmed the decision of the District Court; do you recall about the date of that?

A. That was in 1933.

Q. 18. Following that, did you send the same notices of infringement out to various Robbins users including this particular defendant?

A. I did.

Q. 19. And then when the Supreme Court passed upon the Robbins incubator in January, and handed down its decision on January 7, 1935, were notices then sent to this defendant?

A. There were.

Q. 20. They were sent immediately after the decision, were they not?

A. That is correct.

Q. 21. A matter of about four days as I recall?

A. Between four and ten days.

Q. 22. And they were sent to this particular infringer?

A. That is correct.

[fol. 121] Q. 23. Have you ever had any reply from this defendant since the decision in the Supreme Court was handed down?

A. No, sir.

Q. 24. Any attempt to settle or negotiate?

A. No, sir, there has not been.

Mr. Ely: That is all.

Mr. Toulmin: That is all.

(Witness excused.)

JOSEPH I. TAGGART, was called as a witness on behalf of the plaintiff, in rebuttal, and having been previously duly sworn, testified further as follows:

Direct examination.

By Mr. Ely:

Q. 1. Mr. Taggart, you have testified and qualified as an expert on incubation, and also a patent expert in these various cases that involve the Smith patent?

A. Yes, sir.

Q. 2. And you testified in the Waxham case in California as an expert?

A. Yes, sir.

Q. 3. And a practical expert as well as a technical patent expert?

A. Yes, sir.

Q. 4. And you also testified in the Snow case in the same manner?

A. Yes, sir.

Q. 5. That was the one tried before Judge Molyneaux in Minnesota, and later went through the Eighth Circuit and on up to the Supreme Court?

A. Yes, sir.

Q. 6. Mr. Taggart, this matter of so-called sanitation in [fol. 122] the separate hatcher, this Pulorum disease that Mr. Hall referred to, just how is that transmitted?

A. Pulorum disease is the one disease that can be carried from the mother through the egg to the chick. If the egg at the time it is laid contains the germs, they will go ahead and develop through incubation. At the time the chick hatches or cuts its way out of the shell, it will simply be bathed with these germs, and as the chick dries, they will be released to the air and spread about through the incubator and be breathed in by other chicks. The other chicks become infected by way of the lungs.

That spread can only take place from chick to chick and cannot take place from one egg to another egg or from an egg to a chick, or from a chick to an egg. It is only spread when chicks are hatching in the same machine.

This spread can take place in a separate hatcher or in any other type of machine or even under the hen, if these diseased chicks are present. The fact that there is a separate hatcher has nothing to do with that at all.

Q. 7. That is to say, the presence of eggs that are unbroken, that is, eggs from the first to the 18th day, does not assist in any way to the propagation of the disease, the embyro within the egg shell can not contract the disease from an infected chick that may be in the same chamber?

A. No, sir.

Q. 8. When you go over into a separate hatcher you have all the chicks hatched in the same environment?

A. Yes, sir.

Q. 9. And what is the difference in spreadability, if I may use that word, of the disease in an incubator of the type shown in the Smith patent, where all the eggs are in from [fol. 123] the first to the 21st day, and the separate hatcher where the chicks are only during the hatching time?

A. There is no advantage one way or the other as far as spread taking place.

Q. 10. The disease germs are found upon down released by the chick carried into the air and then breathed by another chick?

A. That is correct.

Q. 11. Can those germs get through the egg shell?

A. No, sir.

Q. 12. They are only transmitted then from chick to chick in the hatching compartment?

A. That is right.

Q. 13. What about the matter of sanitation of the Smith incubator; is the separate hatcher any better as far as the sanitation is concerned than it is in a Smith incubator?

A. As far as the germs are concerned, there is no advantage whatever in the separate hatcher. The sanitation can be practiced in one machine just as well as in another.

Q. 14. Explain that further. What do they do to sanitate it?

A. There is the ordinary clean up, and you can go further and fumigate. In the Smith machines, we fumigate with formaldehyde and render the interior of the machine sterile as far as any of the germs have any effect on the chicks.

Q. 15. And when they sanitate a separate hatcher, what do they do?

A. Follow the same process.

Q. 16. Does the formaldehyde gas have any deleterious effect on the eggs?

A. Not at the strength at which it is used.

Q. 17. Therefore, there is no advantage so far as sanitation is concerned in the separate hatcher idea over the Smith?

A. None whatsoever.

[fol. 124] Q. 18. Let us assume for a moment that an incubator such as the Robbins 26 Incubator, were filled with eggs all at one time, and there are about 26,000 eggs you say in the incubator?

A. Yes, sir.

Q. 19. And how much heat are those eggs generating from the 15th to the 18th day?

A. The amount varies from day to day, but on the 18th day they would be generating about 10 B. T. U's. per piece a day in 24 hours.

Q. 20. And that is to say, if you had your eggs all set at once in the Robbins Incubator, when you got to the 18th day, how much heat would be generated by those eggs?

A. It would be better than 20,000 B. T. U's. per hour.

Q. 21. That would be difficult to keep the incubator cool?

A. It renders it impossible as the incubator is constructed to keep it cool.

Q. 22. In the regular operation of the 26, what effect have the cool eggs in the same incubator compartment?

A. They help to balance this excess heat and tend to keep it substantially balanced between the cool and the warm, so that it is not necessary to add a great deal of heat, nor is it necessary to add very much refrigeration.

Q. 23. It is not necessary to add a great deal of heat when you start off?

A. After you once get the eggs warmed up for the first hour or two, that is, eggs that are put in cold, there is heat added at that time, but when the machine is in operation there is an addition.

Q. 24. Come back to the assumed operation, and you fill this 26 with eggs at one time, what would be your condition as far as the application of heat is concerned?

A. You would have to have heat continuously during the first 10 to 11 days.

[fol. 125] Q. 25. Then what is the benefit of having the eggs in the staged incubation in the 26 incubator?

A. You utilize the heat generated by nature and it makes it possible to put a large volume of eggs in a small com-

partment so that they can be incubated economically. You take advantage of the laws of nature in doing so.

Q. 26. And what is the advantage of having some cold eggs in?

A. It helps to keep the warm eggs cooled in the proper temperature.

Q. 27. And the circulation of the air, what does that do?

A. The circulation of the air equalizes the temperature between the eggs at different stages.

Mr. Ely: That is all.

Cross-examination.

By Mr. Toulmin:

X Q. 28. Mr. Taggart, in the Smith machine as I understand it, when you start up the machine, you operate it continuously through the succession of hatches that you may wish to hatch with the machine, is that correct?

A. Yes, sir.

X Q. 29. You do not shut down the machine between hatches, do you?

A. No, sir.

X Q. 30. When you come to clean your machine, you do not shut the machine down after a hatch and clean it and then start it up again with the Smith machine?

A. You can start the fans off for a short period to pick up the down with the vacuum cleaners. Some do and some do not. At the present time, we recommend that they do.

X Q. 31. But you do not shut the machine down completely and clean it out, everything, and take the eggs out between hatches?

A. No, sir.

X Q. 32. In the defendants' incubators and hatchers, particularly in connection with the hatchery, after the hatch [fol. 126] is taken off of the separate hatcher, all the eggs are taken out of the hatcher?

A. Yes, but not out of the 26.

X Q. 33. And the eggs are taken out of the hatcher?

A. Out of the hatcher, but not out of the incubating unit.

X Q. 34. Let us confine ourselves to the hatcher.

Mr. Ely: There is no use going into detail on that.

X Q. 35. Will you tell me whether all the eggs are taken out of the defendants' hatcher after a hatch?

A. Yes.

X Q. 36. And after they are taken out the hatcher is cleaned out and the hatcher has a sanitary provision applied to it?

A. Yes, sir.

X Q. 37. And then later they put in a new batch of eggs and they are again hatched?

A. Yes, sir.

X Q. 38. And they are again cleaned out?

A. Yes, sir.

Mr. Toulmin: That is all.

Redirect examination.

By Mr. Ely:

R. D. Q. 39. In the operation of the Smith, you clean out, fumigate, and when you move your eggs down to the next hatch, it is all clean down underneath there?

A. Yes, sir.

Mr. Ely: Supplementing my objection to Mr. Toulmin's remarks, of course there is no claim that the hatcher is in issue.

The Court: I understand that.

(Witness excused.)

The Court: Any further evidence?

Mr. Ely: No.

Mr. Toulmin: No.

[fol. 127] PLAINTIFF'S EXHIBIT No. 19

IN THE UNITED STATES DISTRICT COURT, DISTRICT OF CONNECTICUT

In Equity. No. 2369

SAMUEL B. SMITH, Plaintiff,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS, Defendants

AFFIDAVIT OF JOSEPH I. TAGGART

STATE OF OHIO,
County of Cuyahoga, ss:

Joseph I. Taggart, being first duly sworn, deposes and says as follows:

I am a resident of Cleveland, Ohio, and Assistant General Manager of The Smith Incubator Company, which is a corporation of Ohio, owned and controlled by Samuel B. Smith, the inventor and owner of the patent in suit and plaintiff in this cause. I have been connected with the plaintiff and The Smith Incubator Company since the year 1923 in various capacities, and am thoroughly familiar with all phases of incubation, both from the commercial operation of hatcheries and from the technical or biological facts of incubation. Prior to my connection with the plaintiff I was a graduate of Ohio Wesleyan University, where I specialized in zoology and studied incubation from the theoret- [fol. 128] ical side there. I have continued the intensive study of this subject since that time to the present.

I am thoroughly familiar with the Smith patent in suit No. 1,262,860, having testified as a practical expert with respect to said patent in a large number of patent suits involving the same. I testified for the plaintiff, as expert, on this patent in the case of Smith v. Snow, the decision of the Circuit Court of Appeals of the Eighth Circuit therein being reported at 70 F. (2) 564. I also testified for the plaintiff, as expert, on the patent, in the case of Waxham v. Smith in the Circuit Court of Appeals of the Ninth Circuit, reported at 70 F. (2) 457.

A copy of the Smith patent in suit herein is attached hereto and marked Exhibit 1.

The two cases referred to above were recently decided in the Supreme Court of the United States on writs of certiorari to the Eighth and Ninth Circuits, that Court holding the patent valid and infringed in both cases. Copies of the decisions of the Supreme Court in the Snow and Waxham cases are attached hereto and marked Exhibits 2 and 3, respectively.

I have been informed and believe that the defendants, A. B. Hall and L. C. Hall, conduct a hatchery at Wallingford, New Haven County, Connecticut, under the name and style of Hall Brothers, at which place they are engaged and doing business in the commercial incubation of eggs. I visited the place of business of the defendants May 23, 1934. At that time I inspected the several incubators which were then located in the defendants' hatchery. Mr. A. B. Hall, one of the defendants herein, showed me around the plant, and I discussed with him the construction and mode of oper-
[fol. 129] ation of the incubators in the plant.

The defendants had, at that time, a capacity of approximately 600,000 eggs in the incubators in the plant. As it was then late in the hatching season, only about half of this capacity was then in operation, but Mr. Hall told me that, during the height of the season, all of the capacity was used. The incubators which the defendants were then using are what are known as Robbins Incubators, with the construction and mode of which I am familiar as an incubator placed upon the market by The Robbins Incubator Company of Denver, Colorado, which is, I am informed, owned and operated by John L. Robbins of Edgewater, Colorado. In my conversation with Mr. Hall he advised me that the method of operating these incubators was the same as recommended by the manufacturer.

The defendants had in their plant the following Robbins Incubators, as designated by the model number applied by the manufacturer:

3–#17
4–#23
Approx. 16–#26I (or #26-I)

These incubators are substantially alike in construction and method of operation, the principal differences being

that, in the models #17s and #23s, the eggs are retained within the same cabinets during the full twenty-one day hatching period, while in the #26Is the eggs are removed on the eighteenth day, or just prior to the completion of incubation, when the chicks are ready to emerge from the [fol. 130] shells, whereupon they are placed in separate cabinets for the actual emergence of the chicks.

For the purpose of illustrating the construction and mode of operation of all of these incubators, I have selected the #26I incubator, shown in exhibit drawings attached hereto. Exhibit 4 is a vertical cross-section at the side of an egg rack. Exhibit 5 is a longitudinal vertical section on the line A-A of Exhibit 4. Exhibit 6 is a similar section on the line B-B of Exhibit 4.

I also attach hereto, as Exhibit 7, photostatic copy of pages 44 and 45 of Robbins Incubator Manufacturing Company's Catalogue which shows two of these Model 26I incubators (at the left) in conjunction with the cabinet (at the right) in which the eggs are placed at the close of the hatching period, as explained above. The descriptive matter contained on the same page is noted, as the manufacturer there states that these #26I incubators operate upon the same principle as the incubator involved in the Waxham suit, referred to above.

For the purpose of comparison with the structure involved in the Waxham suit, I attach hereto, as Exhibits 8, 9 and 10, photographs of the Robbins #23 Incubator which was involved in that suit. Exhibit 11 is a photostat of page 12 of a Robbins Catalogue, illustrating the #23 incubator showing the tilting drum or rack with the egg trays removed. This view shows, at the rear, the fans used in that incubator, and Exhibit 12 is a photostat of another page of the Robbins Catalogue which shows the fans removed from the incubator. The tilting drum (at the right of Exhibits 8, 9 and 10) is set with eggs set in staged incubation at semi-weekly intervals. At the eighteenth day [fol. 131] the oldest eggs are removed and placed in the stationary racks at the left.

The construction and mode of operation of the fans in the #26I incubator is the same as that in the Robbins Model #23, which was held by the Supreme Court to infringe upon the Smith patent. The fans in the #26I are so designated in Exhibits 4 and 6. Small, fresh air inlets are located

at the rear wall back of the fans, and similar outlets in the ceiling. This is identical with the #23 incubator. The percentage of interchange of fresh and foul air, through those openings in the 26I, is about ½ of 1%, or the same as in the Robbins #23. The eggs in the #26I are arranged in trays in the tilting drums shown in Exhibits 4 and 5, which are identical with the drums in the #23. The fans in the 26I draw the air through the egg drums and discharge it centrifugally along the walls, floor and ceiling, where it moves forwardly, strikes the front wall, and is then drawn back through the drums. This movement of air is identical with that in the #23 described by the Supreme Court on page 2 of Exhibit 3:

"There is no central corridor, the tiers of egg trays being placed in or near the center of the chamber- There are no curtains or similar means of guiding the air currents set in motion by the fans. Two fans are placed on the side wall at the back of the chamber. They turn continuously, and are so constructed and operated as to propel currents of air, which proceed along the sides and the ceiling and [fol. 132] floor of the chamber to the front wall, where they are deflected in the direction of the fans and there 'drawn' toward them through the central part of the chamber. Less than 1% of the air passes out through the foul air exits in the course of making the described circuits, so that there is circulation and recirculation of the air within the chamber. The evidence supports the finding of the special master and of the two courts below that the currents of air set in motion by the fans flow continuously along defined paths.

"The petitioner's machine thus employs every essential of the patented method as it is defined by Claim 1."

I discussed with Mr. Hall the manner in which the eggs were set in the operation of the defendants' incubators. He advised me that the defendants set their eggs by setting one-sixth of the capacity of each drum at semi-weekly intervals. When the drums are filled in this manner each drum contains eggs in six stages of incubation, ranging from newly set eggs to eggs which have been in the incubator eighteen days, and in which the embryo is about ready to chip the shell. These oldest eggs are removed on the eighteenth day and replaced by newly set eggs, so that at all

times staged incubation is being practised. As the eggs in the drum are in all the different stages of embryo development, about one-half of the total egg content of the incubator will be "endothermic" or in the heat absorbing stage and the other half in the "exothermic" or heat generating [fol. 133] stage. No particular order or arrangement of the eggs as to age is observed or followed. The placing of the eggs on the eighteenth day in a separate chick producing cabinet does not affect the operation, which is the same as carried on in the incubating drum in the #23 incubator. As was said by the Supreme Court in the Waxham case (Ex. 3, p. 1):

"Petitioner's incubator differs only in unimportant mechanical details from the infringing machine in the Snow case. In it the eggs are set in staged incubation, at different levels, but in no particular order. They are subjected to circulation of heated air, set in motion by fans, which carries heat units from the warmer to the cooler eggs and maintains the air throughout the chamber at substantially uniform temperature."

The method of setting the eggs in the incubating drum, and the manner and means for propelling the air through those eggs in the #26I Incubator is identical with the operations in the #23.

The method of incubation originated by Smith, and set forth in the patent in suit, and particularly in claim 1 thereof, has been fully described in the opinion of the Supreme Court in Smith v. Snow (Ex. 2), and I will not discuss the same except insofar as it relates particularly to the practise of the defendants.

Attached hereto and marked Exhibit 13, is a chart or graph showing the development of heat units in the egg during the entire twenty-one day hatching period. The heat units developed in an individual egg are shown by the [fol. 134] curved line labeled "Heat Units". As shown therein, the generation of heat starts at about the fifth day and continues in an upward curve to the eighteenth day when there is a short period when there is no increase, and then increases to the last day. On the eighteenth day the heat developed by each egg in a day is slightly more than 2½ large calories. The red line at the base of the chart indicates the heat units absorbed by the egg due to

necessary slow evaporation of the water content of the egg. As will be seen, the amount of heat which is absorbed by the egg during the first ten or eleven days is greater than the amount of heat given off during that period. After the tenth or eleventh day, the heat given off by the egg is in excess. For this reason the eggs are said to be "endothermic", or heat absorbing, during the first ten or eleven days, and "exothermic", or heat generating, thereafter. The area colored blue represents heat units absorbed, and the area colored red the heat units given off. The darker shade of red indicates the heat units which are given off by an egg after it passes into the "exothermic" phase and up to the eighteenth day (at which time the defendants transfer the eggs to the chick producing cabinet). The comparative areas of the blue and dark red portions of the chart demonstrate that approximately 2½ times as much heat is given off by the eggs from the tenth (or eleventh) day to the eighteenth day, as is absorbed by the eggs in the earlier stages of incubation.

The defendants, by transferring the eggs to another compartment at the eighteenth day, do not lose the beneficial [fol. 135] results obtained by arranging the eggs in staged incubation in a chamber in which the air is circulated with sufficient velocity to equalize the temperature of "endothermic" and "exothermic" eggs. The defendants operate and use the invention of the Smith patent by the use of the Robbins #26I Incubators in the procedure stated. The defendants employ a substantial copy of the Smith method, and do not avoid infringement by segregating the eggs which are at the end of the hatching period by placing them in a separate cabinet.

Referring particularly to claim 1 of the patent (Exhibit 1):

The defendants hatch "a plurality of eggs" by the use of the Robbins #26I Incubators. The eggs are arranged "at different levels," as is shown by the arrangement of the trays (Exs. 4 and 5). The operations of the defendants are carried on in "a closed chamber having restricted openings of sufficient capacity for the exhaust of foul air without undue loss of moisture." The defendants apply to the eggs "a current of heated air" created by the fans and [illegible] "by means other than variations of temperature." The current of air thus created circulates over and over through

the eggs in repeated cycles or circuits. The current of a
is "of sufficient velocity to circulate, diffuse and maint
the air throughout the chamber at substantially the sa
temperature." The air in the defendants' incubators
"vitalized" and the "moisture conserved." By the
circulation and recycling of the air "the units of heat w
be carried from the eggs in the more advanced stage of i
cubation to those in a less advanced stage." The incubat
[fol. 136] operates "for the purpose specified" in the Smit
patent, namely, the incubation and hatching of eggs.

Nor do the defendants avoid the use of the Smith pro
ess by removing the eggs from the drum after th
eighteenth day of incubation, for in the drum are foun
eggs in different stages of incubation, both "endothermic"
and "exothermic," so that the equalization of temperatur
between the cooler and warmer eggs is carried on at a
times, and units of heat are carried from eggs in the "mo
advanced" stage of incubation to "those in a less advanced
stage," as called for by claim 1.

The Smith patent has been held valid by various Court
of Appeal and by the Supreme Court, as noted on page
of Exhibit 2. I have examined the Answer filed herein, an
have examined the prior patents set up in paragraph XV
thereof. The major part of the said patents have been co
sidered in one or more of the several litigations on th
Smith patent, and have been held not to anticipate the pa
ent. Such additional patents as are cited do not add any
thing to the prior art which has been repeatedly considered.
The last three publications cited in this paragraph wer
considered in the Snow case and held not to anticipate th
Smith patent.

The first three publications referred to in the same para
graph, and the alleged prior use and publications, referred to
in paragraphs XVII and XVIII, relate to the so-called Has
ings' prior use, and have been considered in the cases o
Wolf v. Buckeye, 296 F. 680 and Buckeye v. Cooley, 17 F.
(2) 453, and held not to anticipate the Smith patent. Th
[fol. 137] prior uses and publications in paragraph XVI o
the Answer relate to the alleged prior use by the patente
Smith, and have been considered in substantially all of th
cases involving the Smith patent, and particularly in th
Snow and Waxham cases. This alleged prior use is n

ferred to by the Supreme Court in the Snow case and held not to anticipate (Ex. 2, p. 8).

The alleged Lawry and Fullington uses, referred to in Paragraphs XIX, XX and XXI of the Answer, were in the Waxham case and rejected by the Circuit Court of Appeals of the Ninth Circuit in Waxham v. Smith, 70 F. (2) 457. A copy of this opinion is attached hereto marked Exhibit 14, particular reference being made to pages 3 and 4 thereof in this respect.

The allegations of paragraphs XXII, XXIII, XXIV and XV were disposed of by the Supreme Court in the Snow and Waxham decisions (Exs. 2 and 3).

There is no defense raised in the Answer that has not been previously considered and rejected by one or more Circuit Courts of Appeal and by the Supreme Court.

The patent in suit expires April 16, 1935. The infringement by the defendants is continuing and is threatened to continue unless enjoined by this Court. I am informed, and believe, that since my visit to the plant of the defendants they have added to their equipment by the purchase and use of a large number of additional incubators of approximately 125,000 egg capacity, of the same style as the #26I described herein. It is very important and urgent that the question of infringement by the defendants be determined at once, and that an injunction issue against the defendants [fols. 138-144] before the beginning of the hatching season, which will start about February 1, 1935. Users of the Robbins incubators and users of similar incubators in all parts of the country are persisting in infringement by the use of incubators operating upon the same principle as the defendants' incubators, and it is essential to the enforcement of the Smith patent that the questions here involved be decided as soon as possible. The damage which is being done to the plaintiff is serious and irreparable, and unless the infringement can be enjoined at once the loss to the patentee may not be recovered.

Joseph I. Taggart.

Sworn to and subscribed before me this 19th day of January, 1935. (Signed) Walter C. Kelsey, Notary Public. Com'n Expires Mar. 15, 1937. (Seal.)

Exhibit 1, Smith patent No. 1,262,860, omitted in printing as it appears at side folio 951 of the James record.

[fol. 145] EXHIBIT 2—WALTER C. KELSEY

IN THE SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1934

No. 102

SAMUEL B. SMITH, Petitioner,

vs.

E. H. SNOW and E. H. SNOW, Doing Business as SNOW'S HATCHERIES and SNOW'S INCUBATOR COMPANY

On Writ of Certiorari to the United States Circuit Court of Appeals for the Eighth Circuit

(January 7, 1935)

Mr. Justice STONE delivered the opinion of the Court:

Certiorari was granted, — U. S. —, to review a decree of the Circuit Court of Appeals for the Eighth Circuit, 70 F. (2d) 564, which reversed the decree of the district court and held valid, but not infringed, the first claim of the Smith Patent, No. 1,262,860, of April 16, 1918, for an improved apparatus and method for the incubation of eggs.[1] The [fol. 146] Court of Appeals for the Ninth Circuit held the same claim valid and infringed in Waxham v. Smith, 70 F. (2d) 457, in which case certiorari was also granted, —

[1] The patent has been extensively litigated. Claim 1 has been held valid and infringed in Buckeye Incubator Co. v. Wolf, 291 Fed. 253, aff'd 296 Fed. 680 (C. C. A. 6th); Buckeye Incubator Co. v. Cooley, 17 F. (2d) 453 (C. C. A. 3rd); Miller Hatcheries, Inc. v. Buckeye Incubator Co., 41 F. (2d) 619 (C. C. A. 8th); Smith v. Jensma, 1 F. Supp. 999 (D. C.); Waxham v. Smith, 70 F. (2d) 457 (C. C. A. 9th). It has been held valid, but not infringed, in Buckeye Incubator Co. v. Blum, 17 F. (2d) 456, aff'd 27 F. (2d) 33 (C. C. A. 6th); Buckeye Incubator Co. v. Petersime, 19 F. (2d) 721 (C. C. A. 6th); Buckeye Incubator Co. v. Hillpot 22 F. (2d) 855, aff'd 24 F. (2d) 341 (C. C. A. 3rd); Boli v. Buckeye Incubator Co., 33 F. (2d) 347, reversed on oth grounds, 46 F. (2d) 965 (C. C. A. 6th); Snow v. Smith, F. (2d) 564 (C. C. A. 8th).

U. S. —. The question thus presented is one of the scope of the claim.

Only so much of the patent as relates to a method for incubation is now involved. Correct appreciation of the contentions made requires a brief exposition of the well-known phenomena which attend the incubation of eggs under natural conditions.

The period for hatching eggs of the domestic hen is twenty-one days. The eggs are cold at the beginning of the period of incubation, although at that time generation has already progressed slightly. Continuation of this process and successful incubation depend upon the application of heat to the eggs, and the maintenance of their temperature at not less than body heat, about 100° F., and not more than 105° F. Any substantial divergence from this range of temperature results in deterioration or death of the embryo, and consequent failure of the hatching process. If the temperature is maintained within this range, the eggs during the first ten days of the period absorb heat required to generate and maintain the life of the embryo. The eggs are then said to be endothermic or heat absorbing. From [fol. 147] the eleventh day until the end of the period the embryo has developed to a point at which the egg generates more heat than is needed to keep the embryo alive. They are then said to be exothermic. From that time on the excess heat is given off to the surrounding air or to objects in contact with the eggs, if at a lower temperature than the eggs.

The development of heat accompanies the oxidation of food elements within the egg, in consequence of which it gives off carbon dioxide during the period of incubation and absorbs oxygen from the external air, both of which pass through the shell of the egg and its lining membrane. During the period of incubation there is also gradual evaporation of moisture from the egg, which tends to reduce its temperature slightly. The best results are obtained if the total evaporation during incubation does not exceed about 15%. Evaporation in excess of that amount affects the embryo adversely, the chick when hatched being undeveloped and lacking normal strength.

Successful artificial incubation therefore involves conformity to three principal requisites; the maintenance of proper temperature during the period of incubation, the

prevention of excessive evaporation of moisture, and the supply of an adequate amount of oxygen, which involves also the removal from the incubator of the carbon dioxide which results from oxidation of the contents of the egg.

The artificial incubation of eggs is an ancient art. It appears to have been known to the Egyptians two thousand years ago, and for a comparable period to the Chinese. [fol. 148] Until Smith, the patentee, carried on his experiments, the effort had been generally to reproduce as nearly as practicable the natural conditions of incubation. In practice eggs, in relatively small number, seldom more than three hundred and usually less, were placed, on the same level, in a cabinet with heating means above the eggs, so that the temperature above the eggs was maintained at a higher point, about 103° F., than that below. To secure the requisite exposure of the eggs to the higher temperature, it was necessary, in the course of incubation, to turn the eggs frequently, as is done by the hen in nature. Provision was made for supplying fresh air to the cabinet and for humidifying the air within the cabinet. All incubators were of the still air type; that is to say, the only movement of air within the incubator was that caused by variations of temperature at different points within the cabinet, resulting in some transmission of heat by radiation or convection. The opinion seems to have prevailed that the presence of currents of air either within or surrounding the cabinet was harmful. Successful operation of this method required nice adjustments of the heating means so as to avoid overheating as the eggs passed into the more advanced stages of incubation, reaching their highest temperature about the seventeenth day.

Smith conceived the idea, embodied in his patent, of setting the eggs in staged incubation within the cabinet and applying to them, in convenient arrangement for that purpose, a current of heated air, propelled by means other than convection. Staged incubation is the successive setting of eggs in the same cabinet at brief intervals of about [fol. 149] three days. At the twenty-first day there would thus be several settings of eggs in the incubator, each at a different stage of incubation, part in the endothermic stage and part in the exothermic. Smith arranged the egg trays or racks in tiers, so that air could be freely circulated among the eggs. He subjected them to a continuous cu

rent of air of the requisite constant temperature of about 100° F., propelled by a fan so that it would circulate freely and repeatedly throughout the cabinet. The heat of the eggs in the later stages of incubation was thus carried by the circulating air of lower temperature to the cooler eggs, in the earlier stages, so that there was a continuous tendency to equalize the temperature throughout the cabinet at approximately the temperature of the introduced current of air.

Before Smith there had been efforts to set eggs in staged incubation, but without practical success, because of the difficulties of securing adequate heat distribution within the incubator. He was the first to apply mechanically circulated currents of air to eggs so arranged. He followed this procedure in conjunction with the use of a restricted opening for the elimination of foul air. By this combination the difference in temperature of the eggs was equalized within the desired range throughout the incubator during the period of incubation, the air within the incubator was gradually replaced by fresh air, and the moisture of the eggs was conserved. His method thus solved the major problems of artificial incubation in a highly efficient manner. It was novel and involved invention. See The Barbed Wire Patent Case, 143 U. S. 275, 283; Krementz v. [fol. 150] The S. Cottle Co., 148 U. S. 556, 559, 560.

That it was invention is not seriously disputed here, and of the many courts which have passed on the patent none has denied its validity. The new method had certain marked advantages over earlier ones. It was possible to carry on the process of incubation continuously by placing fresh eggs in the incubator at intervals, as those of the most advanced stage hatched and the new born chicks were removed. It was possible to apply heated air to the eggs at a constant temperature, thus avoiding the necessity of varying by nice adjustments the temperature of the applied air, so as to conform to the varying temperatures of the eggs as they passed through successive stages of incubation. As the egg racks or trays could be placed in tiers, instead of on a single level, it was possible to arrange them more compactly and greatly increase the number of eggs in a single incubator. Before staged incubation, as developed by Smith, it had not been practicable to operate incubators of a capacity of more than about three hundred

eggs. By use of the new method it is possible to operate successfully an incubator containing as many as 52,000 eggs, and the percentage of eggs successfully hatched by artificial incubation has been materially raised.

The commercial success of the new method was immediate and striking. At first the inventor devoted himself to developing his own hatchery for the use of the new method; it was the largest in existence, with a capacity of over 1,000,000 eggs. In 1922 he began the manufacture and sale of the new incubator. In ten years he, and a corporation [fol. 151] which he had organized for the purpose, had made sales of incubators aggregating about $24,000,000, having a total egg capacity of over 188,000,000. The old type of incubation, with eggs arranged at a single level, all in a single stage of incubation, had thus become obsolete.

That the method employed in the Smith type of incubator was novel and revolutionary in the industry is not challenged. The question presented here is what scope may rightly be given to Claim 1 of the patent; whether the petitioner has drafted it in such form as to secure the fruits of his invention. Claim 1 reads as follows:

"1. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a current of heated air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified."

It will be observed that the claim, standing by itself, asserts the essential elements of the method of incubation to be: (a) the arrangement of the eggs at different levels in staged incubation in a closed chamber, having restricted [fol. 152] openings of sufficient capacity for the escape of foul air without undue loss of moisture; (b) the application to the eggs of heated air in a current created by means other than variation of temperature; and (c) as marking the boundaries of the claim, the current of air is to be

sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature whereby the air will be vitalized, moisture conserved, and the units of heat carried from the eggs in the more advanced stage to those in the less advanced.

To avoid petitioner's charge of infringement two main contentions are pressed by respondents. First, that Claim 1 is restricted to an arrangement of the eggs in such order with respect to the direction of the propelled current of heated air that it will first come in contact with the more advanced eggs. Thus construed, respondents do not infringe, as concededly the movement of air within their incubator does not pass to the eggs in staged incubation in any particular order. Second, that the movement of air in respondents' incubator, produced by the agitating action of fans or propellers, does not result in "a current of air" traveling in a constant predestined path within the meaning of Claim 1. In passing upon these contentions it is necessary to ascertain the proper scope of Claim 1, and to determine whether the characteristic features of respondents' incubator come within its scope. Respondents maintain that the claim is restricted in its scope in the manner indicated above (a) by the disclosures of the patent itself, (b) by the prior art, including the patentee Smith's own [fol. 153] prior public usage, and (c) by estoppels arising from the file wrapper record of the patent.

1. The court below rested its decision on its interpretation of Claim 1, read in the light of the disclosures of the patent, as restricting the patented method to a particular arrangement of the eggs, whereby the current of heated air, after being introduced into the cabinet, first comes in contact with the eggs in the most advanced stage of incubation. It reached this conclusion by comparison of that part of the claim, which speaks of the units of heat as being "carried from the eggs in the more advanced stage of incubation to those in a less advanced stage," with the specifications, which disclose an arrangement of the eggs such that the introduced current of heated air first passes to the more advanced eggs. As respondents' incubators have no such arrangement of the eggs, and as in consequence the forced draft of heated air does not reach the eggs in any particular order, the court held that the respondents do not infringe Claim 1.

The patentee, obedient to the command of the statute (R. S. § 4888), gave such description of the manner of using his discovery as would enable others skilled in the art to use it. The specifications first describe generally the method by which the eggs in staged incubation are arranged in tiers and subjected to forced circulation of heated air through the incubating chamber. The patent states: "The temperature of circulating air should be such as will prevent the eggs in the early stage of incubation from falling below 100° and the speed of velocity of the circulating air [fol. 154] should be such as to carry the heat away from the eggs in the later stage of incubation and thereby hold the temperature of those eggs at 105° or slightly below that. It is manifest that the temperature will remain practically the same throughout the column of eggs, but the air is impelled with sufficient velocity to carry the heat away from the eggs which happen to be in the advanced stage of incubation." The drawings and specifications show the eggs arranged in tiers on either side of the chamber, with an open space or corridor between, at the top of which a revolving fan forces the air downward in the open space of the corridor. Above the fan is a valve-controlled air intake for the introduction of fresh air and above the trays of eggs on either side are shown "outlets for the release of foul air * * * of such restricted capacity as to prevent the undue escape of moisture."

It is true that drawings and specifications indicate a particular arrangement of the eggs from the top to the bottom of the tiers of trays, according to the stage of the incubating process, the eggs being arranged progressively from the least advanced, placed at the top, to the most advanced, placed at the bottom of the tiers. They indicate also that as the eggs most advanced are hatched, they are to be replaced by moving downward the trays containing the several successive settings of eggs which are in earlier stages of incubation. They also speak of a "column" of air of such speed as to keep the temperature substantially uniform, and show curtains hanging from the top of the chamber covering the ends of the trays on either side of the [fol. 155] corridor and extending to a point a short distance above the floor.

With this arrangement the air would be propelled downward to the floor of the chamber, gaining access to the eggs

by passing beneath the ends of the curtains to the trays of eggs at the bottom of the tiers. So much of the air as was introduced through the intake would thus reach the more advanced eggs first. It would then be deflected upward through the egg trays to the top of the chamber, and so much of it as did not pass out through the restricted capacity outlets located at the top of the tiers of trays would be returned to the fan to be propelled again through the described circuit.

We may take it that, as the statute requires, the specifications just detailed show a way of using the inventor's method, and that he conceived that particular way described was the best one. But he is not confined to that particular mode of use since the claims of the patent, not its specifications, measure the invention. Paper Bag Patent Case, 210 U. S. 405, 419; McCarty v. Lehigh Valley R. Co., 160 U. S. 110, 116; Winans v. Denmead, 15 How. 330, 343. While the claims of a patent may incorporate the specifications or drawings by reference, see Snow v. Lake Shore Railroad Company, 121 U. S. 617, 630, and thus limit the patent to the form described in the specifications, it is not necessary to embrace in the claims or describe in the specifications all possible forms in which the claimed principle may be reduced to practice. It is enough that the principle claimed is exemplified by a written description of it and of the manner of using it "in such full, clear, concise, and exact [fol. 156] terms" as will enable one "skilled in the art to make, construct, compound and use the same."

Here the specifications showed an arrangement of the eggs and a means of guiding the current of air so that it would reach the most advanced eggs first. But neither the arrangement nor the means of guiding the current of air are requisite to the application of the principle which Smith discovered and claimed. Without either, the heated air may be given, as Claim 1 prescribes, "sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature whereby • • • the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage." Claim 1 made no mention of curtains or any column of air or means of guiding the current of air, and the inventor made no claim for any particular arrangement of the eggs, except that they should be at different levels.

Moreover, while the specifications and drawings show particular arrangement of the eggs and a particular direction of the current, nowhere in specifications or claim, is stated either that the direction of the current is materi or, what is the equivalent, that the order in which it reach the eggs is material.

Only by resort to the assumption that heat units could not be carried from the more advanced to the cooler and less advanced eggs, unless the initially introduced air first came in contact with the more advanced, is it possible to support the conclusion of the court below and read the claim as calling for a particular arrangement which would [fol. 157] enable the air current to reach the advanced eggs first. Such, of course, would be the case only if the current of air were to make a single circuit, and either remain at its end in contact with the cooler eggs or pass out of the incubator altogether. Neither occurs in petitioner's machine, and there is no reason to suppose that either would produce the desired equalization of temperature. The specifications and claim both contemplate a continuous circulation of the current of heated air through the chamber, which, regardless of its direction, would continuously operate, by repeated contacts with the eggs in all stages, to equalize the temperature throughout the chamber by carrying heat units from the warmer to the cooler eggs.

The claim conforms to the specifications in prescribing "restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture." The amount of foul air allowed to escape through the outlet of restricted capacity necessarily controls the amount of air taken in. In petitioner's commercial machines, regulated to produce the prescribed result in air vitalization and conservation of moisture, the interchange of foul air for fresh is from 1% of 1% to 3% of the air content for each complete circuit of the chamber. This means that the air content of the chamber must make the circuit many times, theoretically from 33 to 200, before an equal volume of fresh air would be drawn in through the intake. Such continuous circulation of the air at constant temperature, lower than that of the more advanced eggs and higher than that of the less advanced, tends to produce the equalization of the temperature [fol. 158] of the eggs by flow of heat units from the warmer eggs to the cooler, regardless of the direction of

current in the circuit, and regardless of the particular stage of the eggs which it reaches first. With other factors constant, the efficiency of this equalization process would depend upon the velocity of the current. The statement of Claim 1 is that the current of air is to be "of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature." The specifications state: "It is obvious that the fans can be so arranged and can be operated at such speed as to cause the hot air to circulate fast enough to keep the temperature throughout the chamber between the limits of 100° and 105°."

It is evident that Claim 1 does not prescribe that the current of air shall be propelled by any particular means, except that it shall be by means other than variation of temperature, nor does it prescribe that the means of propulsion shall be given any particular location, or that the current of air shall be guided by any particular means or given any particular direction. The omission of these requirements from Claim 1 is the more pointed as the other claims of the patent speak in particular of a power-driven fan, of the location of the fan, of curtains and a partition obviously intended to give direction to the current of air, of a vertically directed current of air, and of air circulating from the bottom of the chamber into the parts of it occupied by the tiers of egg trays. Thus by striking and obviously intended contrast with other claims, Claim 1 covers broadly [fol. 159] the essential elements of the Smith invention as we have already described it. Symington Co. v. National Malleable Castings Co., 250 U. S. 383, 385; Lamson Consolidated Store Service Co. v. Hillman, 123 Fed. 416, 419 (C. C. A. 7th); Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills, 209 Fed. 210, 214 (C. C. A. 6th).

Examination of the claim, in the light both of scientific fact and of the particular form in which the petitioner reduced the claim to practice as described in the specifications, makes it plain that the claim does not call for a particular order or arrangement of the eggs in staged incubation in the incubator, or that the propelled current should reach them in any particular order, or that it should be guided, controlled or directed by any particular means, or in any particular manner other than that it should be of sufficient velocity to produce the results prescribed by the

claim. If the matter were doubtful, it is plain from what has been said that the character of the patent and its commercial and practical success are such as to entitle the inventor to broad claims and to a liberal construction of those which he has made. Moreley Machine Co. v. Lancaster, 129 U. S. 263, 273-277; Eibel Co. v. Paper Company, 261 U. S. 45, 63; Winans v. Denmead, supra, 341. In such circumstances, if the claim were fairly susceptible of two constructions, that should be adopted which will secure to the patentee his actual invention, rather than to adopt a construction fatal to the grant, Keystone Manufacturing Co. v. Adams, 151 U. S. 139, 144, 145; McClain v. Ortmayer, 141 U. S. 419, 425.

[fol. 160] 2. We find nothing in the file wrapper defense to disturb our conclusion as to the correct interpretation of Claim 1. It is a familiar rule that a patentee cannot broaden his claim by dropping from it an element which he was compelled to add in order to secure his patent. I. T. S. Rubber Co. v. Essex Rubber Co., 272 U. S. 429, 443; Smith v. Magic City Club, 282 U. S. 784, 789, 790. But the file wrapper lends no support for the application of this rule to petitioner's Claim 1.

The history of Smith's application in the Patent Office is a long one. Four groups of method claims were successively presented to the Patent Office and three were successively rejected. The fourth group ultimately matured into Claims 1, 2 and 3 of the patent. It suffices to say that Claims 1 and 25 of the first group claimed broadly, "The method of hatching eggs by arranging the eggs in a column and applying heated air forced about the eggs, the heated air being adapted to the eggs in various stages of incubation," and "The method of hatching eggs by arranging the eggs in a column one above the other and forcing heated air through said column." In due course the broad claims thus asserted were modified and narrowed by the inclusion of new elements, until they appeared in the form of Claim 1 of the patent. But, as we have seen, none of these additions involve any particular order of arrangement of the eggs or any particular direction or control of the air current, except that the current is to be "of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature."

[161] It is an illuminating fact that the entire written argument filed in support of Claim 1, as it was finally presented to the Patent Office and allowed, makes no reference to any order or arrangement of the eggs, or to shifting the location of the eggs in the incubator, no reference to the location of the fan, the direction of the air current, or to curtains or partitions. The features emphasized were the superiority, over drafts caused by variations of temperature, of "current produced by mechanical means" applied to eggs in staged incubation arranged at different levels, the conservation of moisture, and the elimination of foul air by the restricted air outlets, all features of Claim 1 which are characteristic of both petitioner's and respondents' incubators. We find nothing in the file wrapper to suggest that any addition was made to Claim 1 to restrict the patent to any particular order of arrangement of the eggs or any particular direction or means of control of the current of air, other than its velocity, and nothing to estop the patentee from asserting that the claim is not restricted by such features. See Baltzley v. Spengler Loomis Mfg. Co., 262 Fed. 423, 426 (C. C. A. 2nd); National Hollow B. B. Co. v. Interchangeable B. B. Co., 106 Fed. 693, 714 (C. C. A. 8th). It is of no moment that in the course of the proceedings in the Patent Office the rejection of narrow claims was followed by the allowance of the broader Claim 1. Westinghouse Electric & Mfg. Co. v. Condit Electrical Mfg. Co., 194 Fed. 427, 430 (C. C. A. 2nd).

3. Claim 1 is not limited by the prior art. It is urged that there was disclosure by Smith by public use more than [162] two years before his application for the patent. At the time indicated he used commercially an incubator arranged in three completely separated compartments in each of which there was circulation of the air by a fan. But there was no staged incubation in any single compartment.

The German patent, Stulik, No. 155,917, issued in 1901, disclosed the arrangement of trays of eggs in staged incubation in an enclosed column or stack, with the endothermic lamp at the bottom. The eggs were subjected to a rising column of heated air, which was allowed to escape at the top of the chimney. There was no forced draft of air, no circulation or re-circulation of air, and in consequence no

carrying of heat units from the more advanced eggs at the top to the less advanced eggs at the bottom.

Other patents named, as Winkler, No. 286,756, of 1883, and Zimmer, No. 1,075,747, of 1913, show types of staged incubation, but made no use of a current of air propelled by means other than variations of temperature, and in other respects were so plainly impractical as to call for no extended discussion. This is true also of the description in the 1867 edition of Ure's Dictionary, 652-3, said to represent a method of incubation devised in 1777 by Bonnemain, a Frenchman, and not used since the French Revolution, by which eggs in staged incubation were placed in a closed room heated by hot water pipes, but without other means of producing currents of air. Such rudimentary experiments with isolated elements of Smith's combination did not anticipate his invention. See Smith & Griggs Mfg. Co. v. Sprague, 123 U. S. 249, 255.

[fol. 163] Other patents are cited showing varying types of incubators in which the eggs were placed at different levels, but in which the circulation of air through the incubating chamber by means other than variations in temperature is wanting.[2]

The Proctor & Knowles Patent, No. 426,321 of 1890, and the Schwartz Patent, No. 535,175 of 1895, for methods and apparatus for drying tobacco and other materials, as well as other procedures for ventilation, are so remote from the problems and procedure for hatching eggs as to call for no comment.

This history of the prior art serves to emphasize rather than to discredit the striking advance made by Smith in effecting the combination defined in Claim 1. More than the skill of the art was involved in combining and adjusting its elements in such fashion as to solve the major problems of artificial incubation. The prior art discloses no application of a continuously circulating current of air to eggs in staged incubation which would restrict Claim 1 with re-

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[2] Guerin, U. S. Patent, No. 3,019, March 30, 1843; Bassini & Heyden, U. S. Patent, No. 330,457, November 17, 1885; Van Keuren, U. S. Patent, No. 1,160,793, November 16, 1915; Bell, U. S. Patent, No. 691,837, January 28, 1902; Koons, U. S. Patent, No. 916,454, March 30, 1909.

spect to either to the arrangement of the eggs or the direction or control of the current of air.

4. There remains the question of infringement. The respondents' machine exhibits a closed chamber, with restricted outlet for the escape of foul air and an intake for [fol. 164] fresh air, with eggs arranged at different levels in staged incubation, with a fan-impelled movement of air which circulates and recirculates throughout the chamber. The air moves over and about the eggs, carrying the units of heat from the warmer to the cooler eggs, maintains a substantially uniform temperature throughout the chamber, vitalizes the air and conserves moisture.

As Claim 1 of petitioner's patent is not restricted to any particular order in which the current of air reaches the eggs, respondents do not avoid infringement by interspersing indiscriminately, as they do, the trays of eggs in different stages of incubation. Respondents' claim of non-infringement is thus reduced to the contention that their incubators do not employ circulating currents of air called for by Claim 1. Their emphasis is on the agitation of air in respondents' machine in such a manner that its movement does not follow defined paths through the chamber so as to answer to the description "current of air."

In respondents' machine fans or air propellers are located at either side of the chamber, about mid-way of its height, near the wall and between the wall and tiers of egg trays. They are constructed and operated in such fashion that the air is "drawn" by their action from the central corridor through the tiers of eggs toward the center of the propellers. There, by the centrifugal action of the propellers, it is thrown off the ends of the propeller blades toward the top, bottom and adjacent ends of the chamber. There it is deflected by ceiling, floor and ends of the chamber into the corridor, from whence it is, in due course, again drawn [fol. 165] through the tiers of eggs to the propellers. The propellers are operated, and the air moves, continuously. Since the main movement of the air at the top and bottom of the tiers is toward the center corridor, and since the fans draw in air through the middle of the tiers, there are dead spots in the space occupied by the tiers where the movement of the air is toward the corridor until it joins and is turned back by the current moving toward the propellers.

Claim 1, as already stated, does not call for a current of air moving in any particular direction. Assuming, without deciding, that it calls for a current of air so constant in its movement and direction as not to depart substantially from a well defined path, one would expect that a fan operating, as in respondents' machine, within a closed chamber under substantially constant conditions, would produce currents of air without substantial variations of path. No valid scientific reason or explanation is advanced for any different result. Extensive testimony and elaborate arguments are presented to support the contention that notwithstanding the application of force to the air within the closed chamber by the action of respondents' propellers, under practically constant conditions, the results produced are so variable that "the air goes where it 'listeth' "; they are not convincing. The conclusion is abundantly supported by evidence that there is a continuous movement of air from the blades of respondents' propellers toward the top and bottom and sides of the chamber, thence to the corridor and thence through the tiers of egg trays back to the propellers, and that this movement achieves the purpose [fol. 166] declared in Claim 1, "to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature." The trial judge so found.

That there is a mixture of the air and some confusion of its movement in the corridor, and that at different levels within the space occupied by the tiers of trays the movement is not in the same direction, is immaterial. It is enough that there is a movement of air in current form following substantially defined paths through the tiers of egg trays, sufficient to effect the desired transfer of heat units. Claim 1 does not prescribe that a current of air is to be maintained throughout the chamber. It calls for the application to the eggs of a current of air "of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature." This respondents accomplish by the currents of air set in motion either directly or indirectly by the movement of the blades of the propellers. The method is that of Smith. Respondents do not avoid infringement of the method by varying the details of the apparatus by which they main-

use of it. Cochrane v. Deener, 94 U. S. 780, 788; Tilghman v. Proctor, 102 U. S. 707, 730, 731.

Reversed.

[fol. 167] EXHIBIT 3—WALTER C. KELLY

IN THE SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1934

No. 208

HERBERT H. WAXHAM, Doing Business as WAXHAM HATCHERIES, Petitioner,

vs.

SAMUEL B. SMITH and THE BUCKEYE INCUBATOR COMPANY

On Writ of Certiorari to the United States Circuit Court of Appeals for the Ninth Circuit

[January 7, 1935]

Mr. Justice STONE delivered the opinion of the Court:

In this companion case to No. 102, Smith v. Snow, decided this day, certiorari was granted, — U. S. —, to review a decree of the Court of Appeals for the Ninth Circuit, 70 F. (2d) 457, which affirmed the decree of the district court and held valid and infringed the first claim of the Smith Patent, No. 1,262,860, of April 16, 1918, for an improved apparatus and method for the incubation of eggs.

The issues here, as in the Snow case, are the scope of claim 1 and its infringement as rightly construed. For [fol. 168] reasons stated at length in the opinion in the Snow case, our decision as to the scope of the claim is the same as in that case. Petitioner argues that the claim, if thus broadly construed, is invalid, as an attempt to patent the function performed by the petitioner's incubator. See Hailton Iron and Locomotive Works v. Medart, 158 U. S. 77. It is said also that the function of the machine involves merely the application of the natural law that heat tends to flow from warm to cooler objects placed in proximity.

But the function which a machine performs, here the hatching of eggs, is to be distinguished from the means by which that performance is secured. It is true that Smith made use of the difference in temperature of eggs in different stages of incubation, and the flow of heat units from one to the other, in achieving the desired result. He did this by arrangement of the eggs in staged incubation and applying to them a current of heated air under the conditions specified by Claim 1. By the use of materials in a particular manner he secured the performance of the function by means which had never occurred in nature, and had not been anticipated by the prior art; this is a patentable method or process. Corning v. Burden, 15 How. 252, 267, 268; Risdon Iron & Locomotive Works v. Medart, supra, 77; Cochrane v. Deener, 94 U. S. 780, 788. A method, which may be patented irrespective of the particular form of the mechanism which may be availed of for carrying it into operation, is not to be rejected as "functional," merely because the specifications show a machine capable of using it. Expanded Metal Co. v. Bradford, 214 U. S. 366, 382-386; [fol. 169] Cochrane v. Deener, Supra, 787, 788; cf. Holland Furniture Co. v. Perkins Glue Co., 277 U. S. 245, 255, 256.

Petitioner's incubator differs only in unimportant mechanical details from the infringing machine in the Snow case. In it the eggs are set in staged incubation, at different levels, but in no particular order. They are subjected to circulation of heated air, set in motion by fans, which carries heat units from the warmer to the cooler eggs and maintains the air throughout the chamber at substantially uniform temperature. There is a fresh air intake behind the fans and openings in the ceiling for the exit of foul air. There is no central corridor, the tiers of egg trays being placed in or near the center of the chamber. There are no curtains or similar means of guiding the air currents set in motion by the fans. Two fans are placed on the side wall at the back of the chamber. They turn continuously, and are so construed and operated as to propel currents of air, which proceed along the sides and the ceiling and floor of the chamber to the front wall, where they are deflected in the direction of the fans and there "drawn" toward them through the central part of the chamber. Less than 1% of the air passes out through the foul air exits in the course of making the described circuits, so that there is circulation

and re-circulation of the air within the chamber. The evidence supports the finding of the special master and of the two courts below that the currents of air set in motion by the fans flow continuously along defined paths.

The petitioner's machine thus employs every essential of the patented method as it is defined by Claim 1. Petitioner [fol. 170] does not avoid infringement of respondent's method patent merely by employing it in a machine of different structure than respondent's, whether more or less efficiently. Winans v. Denmead, 15 How. 330, 344; Sewall v. Jones, 91 U. S. 171, 184; Cochrane v. Deener, supra, 789; Carnegie Steel Co. v. Cambria Iron Co., 185 U. S. 403, 441.

Affirmed.

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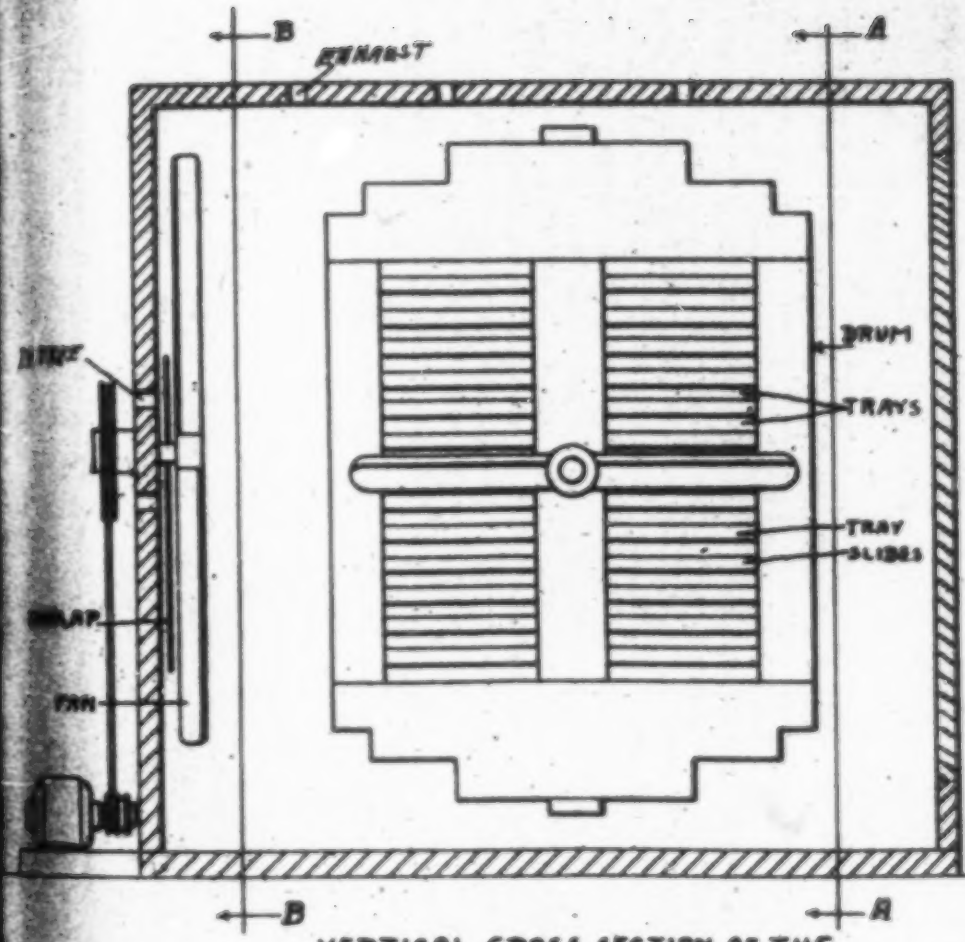


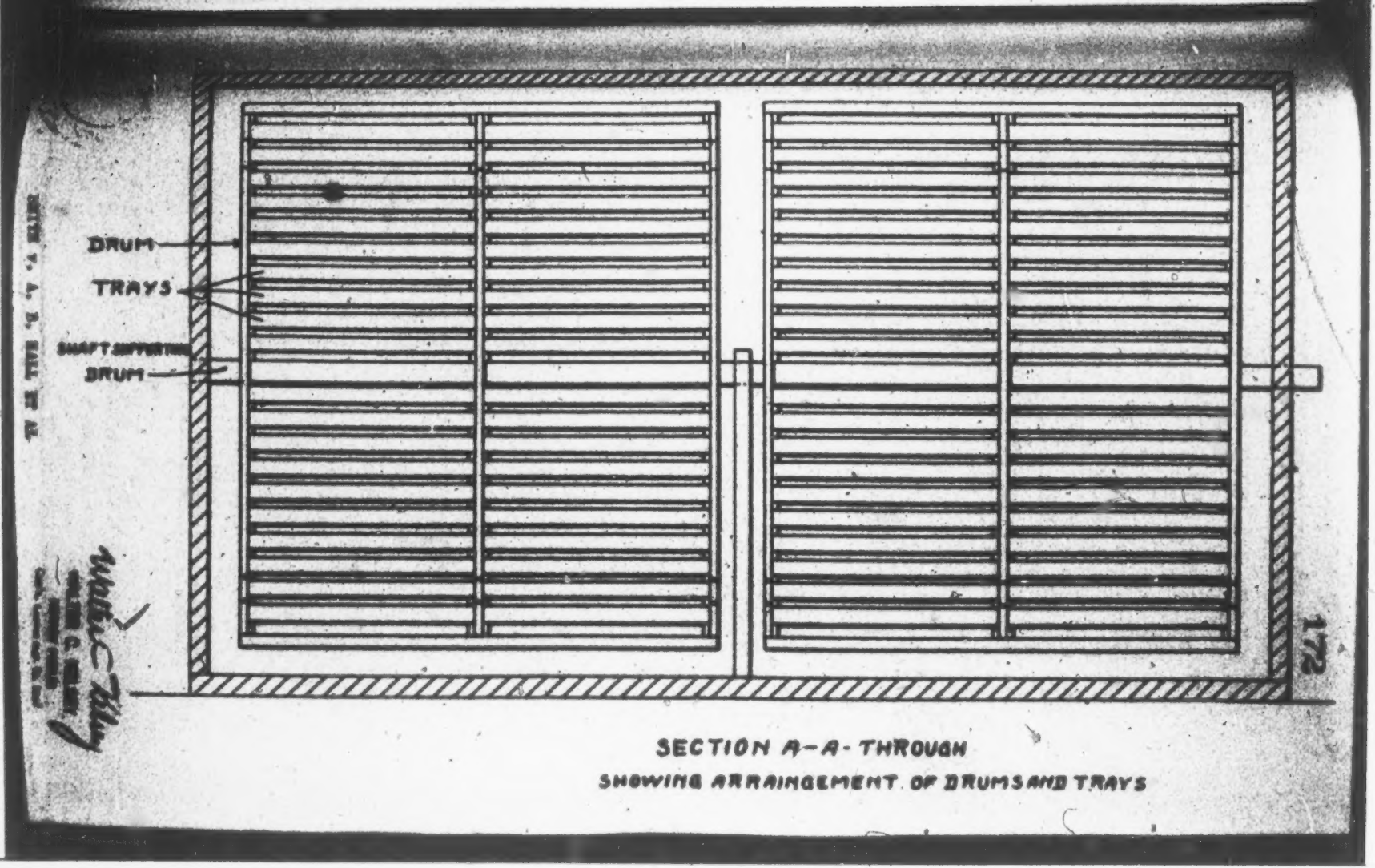
VERTICAL CROSS SECTION OF THE
ROBBIN INCUBATOR MODEL 26-1

SMITH v. A. B. HALL ET AL

exhibit -4

Walter C. Kelley

WALTER C. KELSEY



SECTION A-A- THROUGH

SHOWING ARRAINGEMENT OF DRUMS AND TRAYS

SECTION - B - B THROUGH
SHOWING ARRAINGEMENT OF FANS

Walter C. Kelsey
WALTER C. KELSEY
NOTARY PUBLIC

WALTER C. K... NOTARY PUBLIC
SMITH v. A. B. HALL ET AL.
exhibit -7-

ROBBINS

Two Separate Incubators and One Hatcher in One Complete Unit--Total Capacity 72,000

LOWEST COST EVER QUOTED FOR LIKE CAPACITY

Multi-Incubator-Hatcher

...new unit is a new adaptation of Robbins ...of incubation. It consists of two mammoth ..., each with a capacity of 31,000, and a sep...cher with a capacity of 10,000—total capacity

...Incubator can be bought with one Hatcher, ...the second Incubator when needed. This plan ...the smaller hatchery to start using the multi... a minimum investment.

...Robbins Multi-Incubator-Hatcher uses the ...thods of temperature control, circulation and ... regulation as are now proven successful in ...bins models.

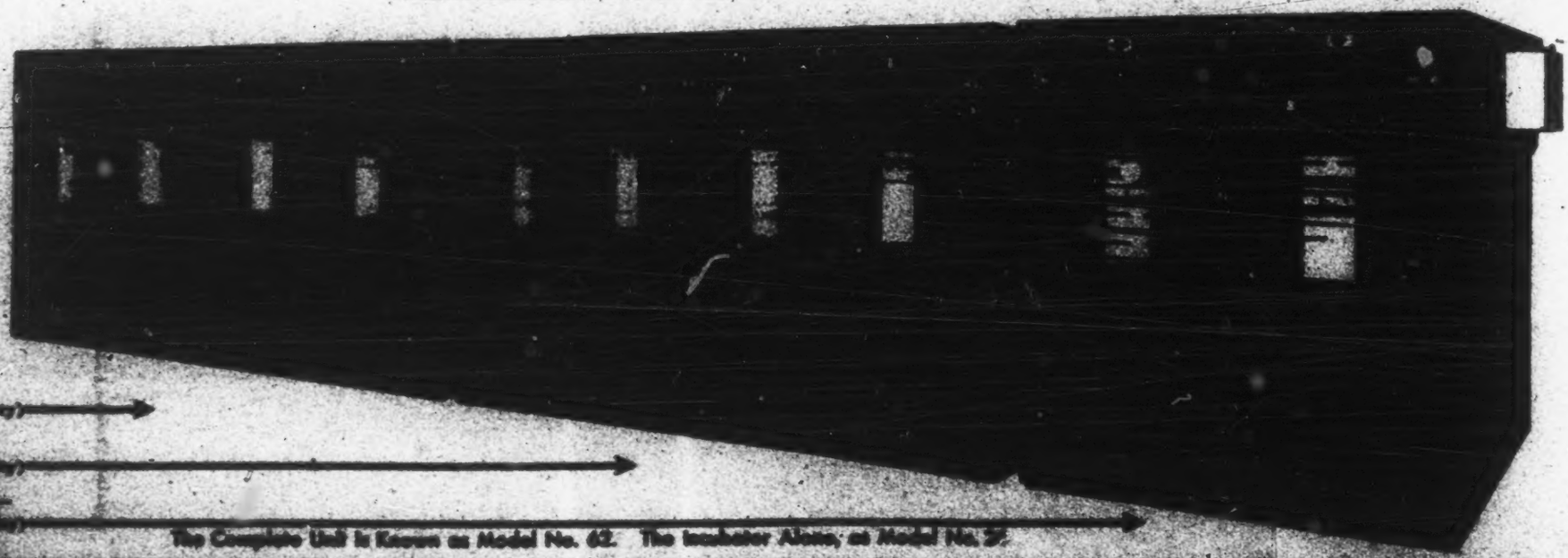
...bins electric Incubators are putting hundreds ...nds of dollars in the pockets of hatcherymen. ... multi-unit is an even more economical ar... t and may prove more popular than the ...models.

THE LINCOLN HATCHERY, Lincoln, Nebr., W. G. Lewis, Pres., Has Placed an Order for 14 Units of the Robbins Multi-Incubator-Hatcher, total capacity 1,008,000. The Lincoln Hatchery Already Owns and Operates 27 Model 23 Robbins Incubators

Every mechanical feature that has made the Robbins Incubator the hatching wonder of the world is incorporated in this new combination—even the new Humidifier-Cooler—which was shipped free and prepaid to every Robbins user during the spring (1930).

While no single principle of circulation, temperature control or humidity regulation is different from regular Robbins machines, the multi-unit has been thoroly tested and checked thru a season's hatching in our own experimental hatchery.

The illustration shows a complete unit of the Robbins Multi-Incubator-Hatcher. Each machine is operated entirely independently of the other, and the three cabinets may be arranged as desired.



The Complete Unit is Known as Model No. 62. The Incubator Alone, as Model No. 3...

175

exhibit -B-

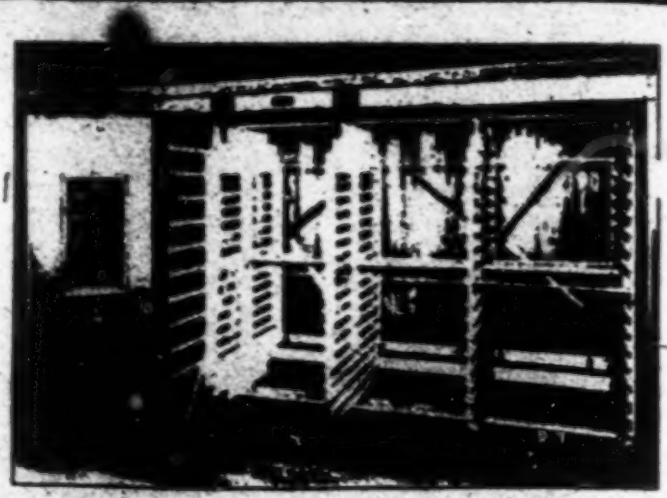
176

177

Exhibit -10-

178 WALTER E. KELSEY [illegible] SMITH v. A. B. HALL ET AL exhibit -11- Walter E. Kelsey

"IT'S A PROFITABLE PLEASURE TO OPERATE A ROBBINS"



HATCHERYMEN will study this picture with delight because it explains clearly some reasons why users say, "It is a pleasure to operate a Robbins."

The egg tray rack is shown here in an upright position. When the eggs are turned in one position the whole egg tray rack is tilted with the top forward and the bottom in. A few easy turns of the crank and this position is instantly reversed, bringing the bottom out and the top in. When the eggs are being removed or when getting ready to set new ones the rack is turned to an upright position.

The Robbins method of turning the eggs is unique because you do not have to look for stop pin holes on any turning device. Wherever you stop the machine it is ready to turn automatically.

Note that the top tray is within easy reach from the floor. With the exception of the one next to the top and the tray next to the bottom, all trays are uniform in size and interchangeable. Even these four are alike in size and are interchangeable.

The hatching section at the extreme left in this picture is not closed off from the incubator section. Having the hatching trays at one end of the incubator is one of the great conveniences of the Robbins. The hatching trays are in the most desirable position to handle easily and for quick and easy cleaning. The air circulation of the Robbins is so devised that the down or chick fuzz is deposited on the floor at the front of the incubator.

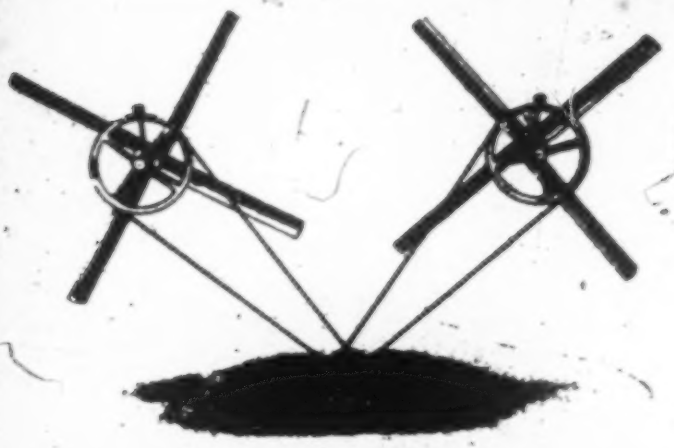
With the hatching section at one end of the machine, the incubator is always clean; there can be no droppings or dirt on the egg tray frames, eggs or trays.

The [illegible] history of Robbins [illegible] on other pages of this catalog [illegible] reference to the time saved and the convenience of operating these machines. The above explains why, in part.

---

result

WALTER C. KELSEY SMITH v. A. B. HALL ET AL 179
NOTARY PUBLIC Exhibit -II-
Walter C. Kelsey



Accessibility of All Parts Save Time and Insures Against Costly Delays

BEFORE going into the subject of how the Robbins Circulator operates it is essential that you first understand our arrangement of the circulation equipment and our reasons for this arrangement.

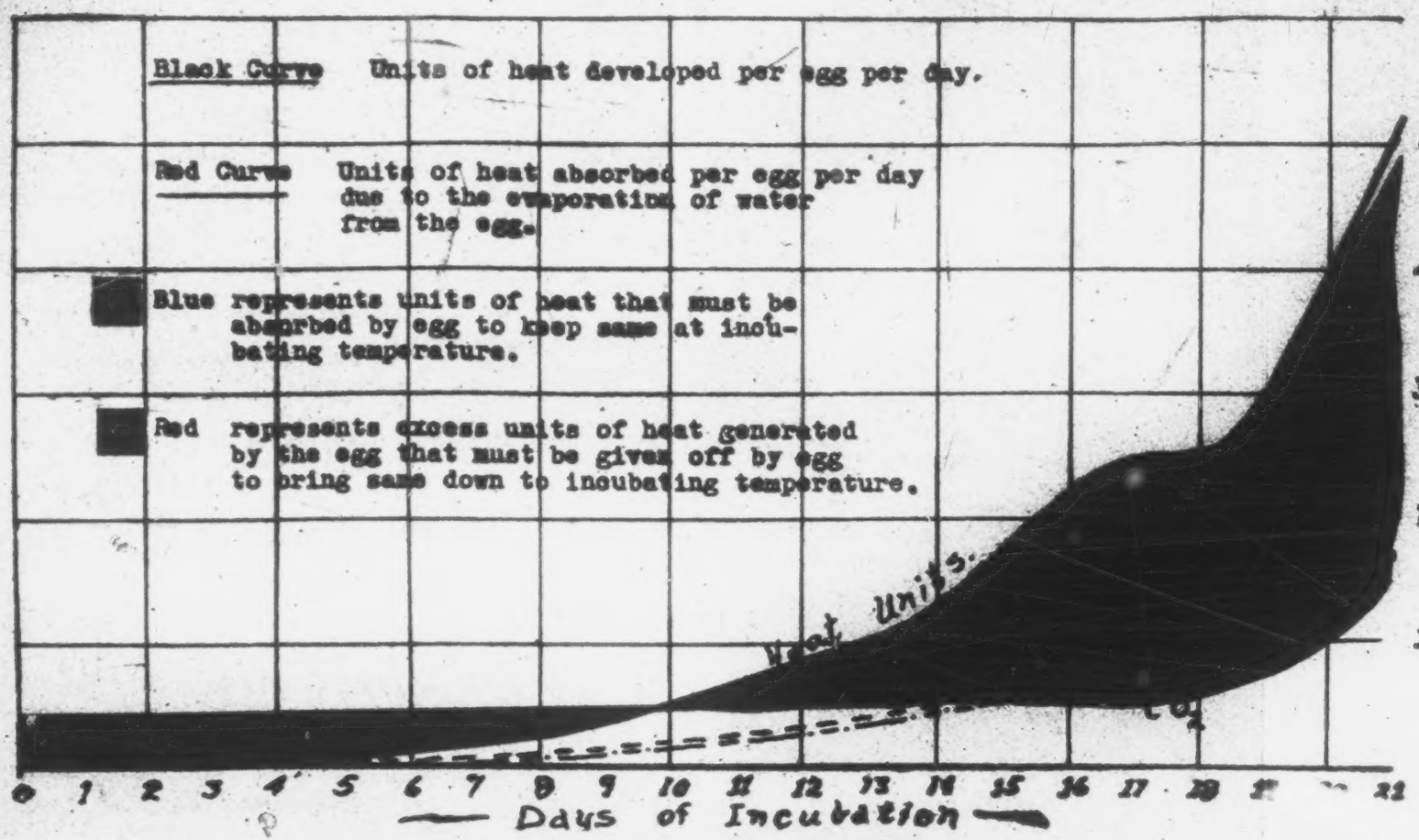
Motor Specifications: Models 14, 17, 19 and 22 are equipped with a ½ horse power Master motor, 110 or 220 AC or 220 DC. Models 4, 7 and 9 are equipped with a ¼ horse power Master motor, 110 or 220 AC or 220 DC.

Fan Specifications: The fans in Model Nos. 4, 7, 9, 14 and 17 have 22-inch blades; the fans in Model Nos. 19 and 22 have 27 and 25-inch blades; the Model Nos. 4, 7 and 9 have one fan; the Model Nos. 14, 17, 19 and 22 have two fans. The fans are just inside the back wall and directly behind the egg racks. The pulleys, belts and bearing others are mounted on the outside of the back wall. The motor is anchored on the floor directly behind the incubator, thus eliminating vibration.

Propellers are mounted on frictionless ball bearings and with occasional oiling (from the outside), will run indefinitely.

While the air circulation and ventilation apparatus may, and in all probability will, run for years without attention, it is exceedingly important to have it all accessible from the outside, as it is in the Robbins. Should repairs or adjustments become necessary on the Robbins, you can make them easily and quickly without disturbing the eggs. Without the steady running of the circulator, your hatch is ruined—and part of your hatching season may be lost if you have to take the machine apart for repairs. With the Robbins, you need not worry about this.

If you have never had a bearing stick, you may look upon this as of little importance. It is true, bearings may run for years without trouble. It is also true that bearings do sometimes stick after running only a few days. If a bearing "freezes" in an inaccessible place, tearing down the machine means ruin to your hatch. With the Robbins there are no inaccessible bearings.



Walter C. Kelly 19

WALTER C. KELLY

SMITH v. A. B. HILL ET AL

exhibit -15-

GRAPH SHOWING DEVELOPMENT OF HEAT UNITS DURING INCUBATION.

...above graph shows the heat development within an in-...ing egg during the 21 days of incubation. The heavy ... indicates heat units given off per egg per day. ... is shown in calories (.252 calories equal one B.T.U. ...er dashed curve indicates the amount of oxygen ...d. The lower dashed-dot curve shows the carbon-... given off. The oxygen and carbon-dioxide are ... in grams per egg per day.

...the first four days no heat is given off by the ... indicate that some heat is absorbed during ... From the fourth day heat is given off by ... which steadily increases with the exception of ... day. On this day the heat given off, and the ... consumed, hold steadily about as at the close of ... day. On the 18th day the increasing develop-... heat is resumed in earnest, and doubles between then and the time of hatching. There has been several explanations why the embryo apparently stands still during the 18th day. Probably the best explanation is that during the first 17 days the chick has been living off of the white of the egg while on the 18th day it begins to assimilate the yolk. This changing food diet probably causes readjustment which temporarily checks development.

The above graphs are the result of studies with calorimeters. The egg is placed within a calorimeter that is maintained at a constant temperature. Proper allowance is made for all heat radiated, and the heat generated within the egg can be measured. At the same time accurate check is kept on all air that passes in and out of the calorimeter, measuring the oxygen consumed and the carbon-dioxide given off. J. I. T. 3/22/30.

[131] EXHIBIT 14—WALTER C. KNIGHT

CIRCUIT COURT OF APPEALS, NINTH CIRCUIT

April 9, 1934.

No. 7154

...ERT H. WAXHAM, Doing Business as WAXHAM HATCHERIES, Appellant and Cross-Appellee,

vs.

...EL B. SMITH and THE BUCKEYE INCUBATOR COMPANY, Appellees and Cross-Appellants

...Appeal from the District Court of the United States ...the Southern District of California, Central Division

...ce Wilbur, Sawtelle and Garrecht, Circuit Judges

..., Circuit Judge:

...suit was brought by Samuel B. Smith, patentee, and ...keye Incubator Company, a licensee, under patent [132] No. 1,262,860, issued April 16, 1918, for an in..., against Herbert H. Waxham for the infringement ... patent by the use of an incubator known as Robbins ... incubator purporting to be manufactured under and ...nt to patent No. 1,728,980, issued September 24, ... J. L. Robbins. The matter was referred to a spe...ter who reported that the Smith patent was valid ... infringed. This decision was affirmed by the Dis...urt and defendant appeals from the decree. Sam... Smith and the Buckeye Incubator Company also ...from that portion of the decree which held that the ...t did not infringe claim No. 2 of the patent. The ...ent has been so frequently before the courts and ...described in the numerous opinions filed that we ...ll our description so far as possible.

...ion of the appellees is that the Smith patent and ... completely revolutionized the art of hatching ...bators. In support of that contention they ... that since the patent was issued more than ..., ...ds of incubators manufactured thereunder have ... with a total capacity of over 150,000,000 eggs.

The art of hatching eggs by incubators is old. The claim advanced is that under all the old methods a relatively small number of eggs could be placed in the incubator at one time; that by the method described in the Smith patent it is possible to increase the number of eggs in the incubator at one time, almost indefinitely, incubators manufactured under the patent having a capacity of from 25,000 [fol. 183] to 50,000 eggs being in common use. The claims of the invention which are involved in this action are Nos. 1 and 2, as follows:

"1. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a current of heated air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified.

"2. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a power driven current of heated air in an adjacent chamber through openings into the egg chamber, said current being of sufficient velocity to circulate, diffuse and maintain the air throughout the egg chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified."

[fol. 184] In the incubation of eggs they begin to give off heat and to absorb oxygen and give off carbon dioxide about the fifth day. Up to that time it is necessary to supply artificial heat to start the process of incubation. Thereafter it is essential to supply the necessary oxygen and remove the carbon dioxide, and also to remove the heat developed by the egg itself. The removal of heat from

the eggs was ordinarily accomplished by reducing the temperature in the incubator so that a circulation of air was produced by the heated air arising from the egg being replaced by the colder air enclosed in the incubator, that is, by convection. The Smith method of incubation instead of relying upon the gentle currents of air thus produced contemplates a large volume of air in an enclosed chamber kept at a uniform temperature of from 100 to 105° circulated by means of fans with such great velocity that it prevents the building up of small quantities of superheated air in immediate contact with the eggs generating heat during the last stages of incubation. The same movement of air which removes the excess heat from the egg also removes the carbon dioxide in immediate contact with the shell of the egg and replaces it with air in the average condition of heat, moisture and purity in the incubator. The temperature of the air in the incubator is regulated by thermostatic control, additional heat being necessary to that supplied by the eggs in the latter stages of incubation. To get rid of the excess carbon dioxide given off by the hatching chicks, a small vent from the large incubator chamber is provided and from the vent a small amount of air is constantly escaping, being replaced by fresh air [fol. 185] drawn in by the ventilating fan and forced into the incubating chamber to mix with the large volume of air which is being constantly circulated by the fan. The recirculation of the air tends to conserve the moisture in the eggs and reduce the cost and simplify the method of heating. Apparently the key to the problem of incubation in mammoth incubators by what is known as staged incubation, lay in the ability to maintain a constant temperature in the incubating compartment. To do this it is necessary that the air currents in the incubator move with comparatively high velocity. This velocity in the Smith machine is obtained by a number of comparatively small electric fans. In the operation of the Smith machine the velocity of the column of air leaving the fan is about 1200 feet per minute. Its speed when it enters the region of the hatching trays is approximately 250 feet per minute, as through the hatching trays from 20 to 40 feet per minute, up through the tilting trays varies from 50 to 60 to as high as 150 feet per minute, and as the column of air returns to the fan where it crosses the beams at the top is

approximately 500 feet per minute. In the machines manufactured under the Smith patent the fresh eggs are placed at the top of the column and the eggs in the last stages of incubation are at the bottom, the eggs being lowered from day to day as the chicks are moved from the lower boxes.

The validity of this patent has been sustained in every decision heretofore rendered in which the patent has been involved. Three of the decisions were renderd by Circuit Courts of Appals. Buckeye Incubator Co. v. Wolf, 291 [fol. 186] Fed. 253, affirmed in Wolf v. Buckeye Incubator Co. (C. C. A. 6), 296 Fed. 680; Buckeye Incubator Co. v. Cooley (C. C. A. 3), 17 F. (2d) 453; Buckeye Incubator Co. v. Blum, 17 F. (2d) 456, affirmed (C. C. A. 6), 27 F. (2d) 333; Buckeye Incubator Co. v. Petersime (C. C. A. 6), 19 F. (2d) 721; Buckeye Incubator Co. v. Hillpot, 22 F. (2d) 855, affirmed (C. C. A. 3), 24 F. (2d) 341; Miller Hatcheries v. Buckeye Incubator Co. (C. C. A. 8), 41 F. (2d) 619. Notwithstanding these decisions the appellant contends that the patent is invalid on the ground that it was anticipated in the prior art and contends that some features of the prior art were not presented, or if presented were not considered in the decisions heretofore renderd sustaining the patent. In view of the decisions above referred to interpreting the Smith patent we deem it unnecessary to further discuss either the nature or character of the invention or to describe the method of incubation covered by the Smith patent or to attempt to define the limitations placed upon the patent by these decisions which in that regard are not entirely consistent.

One of the prior uses principally relied on by appellant is the Fullington prior use which is the only one relied on which has not been before the courts in prior cases involving the validity of the Smith patent. This device consisted of a small incubator of the still air type adopted to hold approximately one hundred eggs in a single tray and at single setting to which Fullington attached a fan operated by dry cell batteries. The temperature in the incubator was controlled by a thermostat connected to the fan and when the temperature rose above a certain point the ther- [fol. 187] mostat caused the fan to start up blowing fresh cool air into the incubator from the outside and discharging an equivalent amount of hot foul air out of the incubator through vents placed in the incubator for that purpose.

the temperature was reduced to the proper degree the thermostat acted to stop the fan. In the Fullington device there was no definite continuous current of air circulating as has been held to be essential in the Smith patent, but the fan operated only intermittently when the air in the incubator became too hot. Nor was the idea of staged incubation incorporated in the Fullington use as Fullington testified that all the eggs were set at the same time on a single tray and not with spaced tiers or layers of eggs one above the other in different stages of incubation. This fan attachment was used for only three settings when its use was abandoned and the incubator was thereafter used without it. The sole purpose sought to be obtained by the Fullington device was to keep the eggs from overheating and the Fullington prior use falls far short of anticipating the Smith patent which utilizes the heat generated by the eggs in the last stages of incubation to heat the eggs in the earlier stages, and conversely, the lower temperature of the latter eggs to reduce the temperature of the eggs in the other stages. The other prior use principally relied upon by the appellant to defeat the Smith patent is that by Lawry. Lawry did provide for a large chamber of heated air in which the eggs were placed. He did provide small vents above and below this chamber through which the air entered and escaped from the incubating chamber. The [Vol. 188] air in the Lawry process was given some momentum by an electric fan but the effect of this momentum was almost entirely dissipated by the fact that the current of air was forced through a large number of small openings and escaped through similar openings to return through narrow passages to the fan to be again circulated through the incubation chamber. The obvious purpose of Lawry in this method of incubation was to supply fresh air without agitating the contents of the incubating chamber any more than was necessary to supply the fresh air. Apparently there was no effort to remove the heat from the incubating eggs by a current of high velocity. The plan was obscure and was abandoned and need not be further considered. We conclude that the Smith patent is valid.

The next question is whether it is infringed by the incubator used by the appellant Waxham purporting to be covered under the Robbins patent. Claims 1 and 2 of the Robbins patent are as follows:

"1. An incubator comprising an elongated compartment whose front side is formed by doors that may be opened and closed, an egg tray rack located within the compartment, said rack being supported by a shaft extending lengthwise of the compartment and located closer to the front than to the rear wall, the rack being provided with transversely extending slides for supporting egg trays, egg trays carried on said slides, a fan located between the rear of the egg tray rack and the rear wall of the compartment and rotatable about a horizontal axis perpendicular to the [fol. 189] rear wall, and means for rotating the fan so as to produce an air current that travels from the fan towards the doors directly in front of the fan whereby the air will return towards the fan along the outside of the central air current.

"2. An incubator comprising an elongated compartment whose front side is provided with doors that may be opened and closed, an egg tray rack located within the compartment, said rack being provided with transversely extending slides for supporting egg trays, egg trays carrier on the slides, a fan located between the egg tray rack and the rear wall of the compartment and rotatable about a horizontal axis substantially perpendicular to the rear wall whereby when the fan is rotated it will produce an air current that travels through the egg tray rack between the super-positioned egg trays, and means for turning the eggs."

This patent contemplated the rotation of a large fan in the incubating chamber, thus generating air currents. The patent states that the currents travel directly forward from the fan toward the door and return along the walls of the chamber "along the outside of the central air current," that is to say, the patent contemplates currents of air generated by the fan moving from the fan through the eggs in the chamber and returning to the fan. This is exactly what is done by the method outlined in the Smith patent. The differences, however, are two: In the Smith patent the air [fol. 190] moves in vertical columns passing downward from the fan and returning upward thereto. The two columns, that is, the down column and the up column, are separated by a curtain. The upward current is caused by the downward current striking the bottom of the incubator and

shrooming under the curtain and drawn upward by the tion of the fan and by the pressure of the downward mn of air. Accoording to the Robbins patent the same ing is accomplished without the curtain and the current olves in a horizontal instead of a vertical plane. Obusly these differences are of no significance. They are re substitutes for the plan in the Smith patent. If an provement results from the elimination of the curtain is nevertheless an infringement of the Smith patent. he machine operated by the appellant Waxham, however, es not operate in accordance with the claims of the Robins patent. In fact, according to the findings of the master, the air currents move in exactly the opposite direction rom that described in the patent; that is to say, the air is forced from the periphery of the large fan operating in the nclosed space to the walls of the incubating chamber and follows the side walls to the front doors where, striking hose doors, it is deflected inward and then drawn to the nter of the fans by the suction resulting from the outward movement of the air along the blades of the fan to heir periphery. In actual operation the fan is large and moves with high velocity so that the current of air leaving he periphery of the fan and going outwardly along the alls of the chamber is moving about 900 feet per minute, s speed when it strikes the front wall of the chamber and [fol. 191] turns inwardly is about 250 feet per minute, and s it passes through and around the trays on returning to he fan its speed varies from 40 to 350 feet per minute, increasing as it nears the vortex of the fan to as high as 600 eet per minute. There is a definite and continues current f air utilized in the Waxham device moving at a velocity ot materially different from the speed of the air current n the Smith patent and accomplishing substantially the ame purpose.

The appellant seeks to avoid the claim of infringement y reason of the fact that the eggs in his machine are not laced in a single column with the fresh eggs at the top nd eggs which are hatching at the bottom, but are distributed through the chamber without any endeavor to place hem in any exact relationship. This difference is clearly immaterial where the air in a chamber is kept at a constant nd uniform temperature and rapidly circulated. The result of currents of air moving with high velocity would

be to transfer heat from the older eggs to the fresher and colder eggs in either event. The important thing is the high velocity of the air current, avoiding stagnation in the immediate vicinity of the eggs in later stages of incubation.

The appellant relies upon the decision of the Circuit Court of Appeals in the Petersime case where it was held that a device which merely agitated the air in the incubating chamber did not infringe the Smith patent. We are not concerned with such a device in this case. We have indicated in another case recently filed that the findings of the master on the question of infringement, approved by [fol. 192] the trial court, should be given great weight. Stoody Co. v. Mills Alloys, 67 F. (2d) 807. In this case we are satisfied that the decision of the master is correct for the reasons we have stated, and for others which are more elaborately stated by the master and which we need not repeat.

With reference to the cross appeal of the plaintiffs we do not see how it can be seriously contended that the second claim of the patent is infringed and there is no argument thereon in the briefs. Claim 2 of the Smith patent contemplates a power driven current of heated air originating in an adjacent chamber and passing through openings into the egg chamber and in the Waxham device there is no adjacent chamber and the air currents are entirely within the enclosed chamber.

Decree affirmed.

(Endorsed): Opinion. Filed Apr. 9, 1934. Paul F. O'Brien, Clerk.

[193] PLAINTIFF'S EXHIBIT No. 20

IN THE UNITED STATES DISTRICT COURT, DISTRICT OF CONNECTICUT

In Equity. No. 2369

SAMUEL B. SMITH, Plaintiff,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS, Defendants

AFFIDAVIT OF JOSEPH I. TAGGART

STATE OF OHIO,
County of Cuyahoga, ss:

I am the same Joseph I. Taggart who made the former affidavit in this case. I have read the Brief filed in Behalf of Defendants herein, and the other papers referred to therein. I was present at the hearing before Judge McCormick in the Southern District of California in the Martin and Fontana Farms cases, and am familiar with the subsequent proceedings in such cases.

In the Waxham case pending before the Supreme Court on Petition for Rehearing, that Court, upon motion of the respondent (plaintiff here) on the 4th day of February, ordered that the Mandate go down at once, and the Mandate was forwarded to the District Court on the 5th inst. Furthermore, the petitions for rehearing in the Snow and [194] Waxham cases were denied February 18th, 1935. The total present capacity of defendants' several incubators is approximately 725,000 eggs. From the date of filing of the motion for preliminary injunction (January [illegible]) to the date of expiration of the patent in suit (April [illegible]), the defendants will hatch 140,000 chicks per week on an average, as shown by their advertisements on pages 22 and 23 of "New England Poultryman" of Jan. 15, 1935, a total of 1,960,000 chicks (Ex. 14).

In a former litigation, in which profits were awarded (Hatcheries v. Buckeye, 41 F. [2] 619), awards of approximately one-and-a-quarter cents (.0125) per chick were made by the Court for most inefficient operations and at low prices, while for more efficient operations

three cents (.03) a chick were awarded. Both findings were affirmed and no appeal taken.

I am familiar with defendants' operations, and they are most efficient, and they receive the top prices for their chicks. It is my belief from these facts that defendants should average three cents a chick profit, if not more. Defendants' profit during the period will undoubtedly be $56,400.00 or more. The entire profit which the defendants have realized from six years prior to the filing of the Bill of Complaint to the date of expiration of the patent is difficult to estimate, but it should be in the neighborhood of $400,000.00 to $500,000.00. As the defendants operate one of the largest hatchery establishments in the country, this estimate is not unreasonable.

Referring to the action of Judge McCormick on the mo-
[fol. 195] tion for preliminary injunction in the Austin and Fontana Farms cases, the Judge was advised of the pendency of the petition for writ of certiorari in the Waxham case. This was allowed by the Supreme Court October 8, 1934, and the Judge did not deny the motions until October 10, 1934.

In the Austin Farms case the incubator in suit was identical with that involved in the Waxham case, i. e., no eighteen day question was involved. In the Fontana Farms case the eighteen day question was raised. Judge McCormick denied the motion for preliminary injunction in both cases.

The delay in the hearing of the appeal of these cases in Circuit Court of Appeals for the Ninth Circuit is, I am informed, due to the vacancies on that bench, caused by the recent deaths of two of the justices.

The important period of incubation is the first eighteen days, at the end of which period the embryo has developed into an active chick ready to pipe the shell and issue. If the embryos can successfully be brought to this stage of its development it has reached a point where careful treatment of the eggs is not necessary. It is not an uncommon expedient to remove the eggs from the hen's nest at this time, and hatch them in a reasonably warm environment, such as under the kitchen stove. The defendants, in the operation of the 26-I Incubators, utilize the Smith process during the critical period of development, and during the eighteen days that the 26-I incubators are being used by

defendants, the eggs from the eleventh to the eighteenth day are generating large quantities of heat which is trans-
[fol. 196] ferred to the cold, heat absorbing eggs from one to eleven days old, and the colder eggs reduce the temperature of the air. The eggs during the 15th to the 18th day are the most difficult to keep from attaining a temperature destructive of the embryo in its then delicate condition. (See Smith patent, p. 2, ls. 63-72.)

The heat generated by the eggs from the eighteenth to the twenty-first day is not essential to the Smith process, for it is quite practicable to remove the eggs from a Smith incubator and transfer them to a separate hatching chamber. The manufacturer of the Robbins Incubator advertises that separate hatchers, such as used by defendants, may be used with Smith and Buckeye Incubators, both of which are made under the patent. (See page 14, Robbins 1933 catalogue, photostat attached marked Ex. 15.) However, no useful purpose is secured by the use of a separate hatcher and, as the operation of a separate hatcher is less efficient, Smith does not recommend it for those reasons.

Robbins (who is conducting the defense of this case) claims that the #23 Incubators involved in the Waxham case, as well as the incubators used by the defendants here, are manufactured under Reissue patent No. 18,984 of October 31, 1933 (page 2 of defendants' brief). In this patent, copy of which is attached hereto, marked Ex. 16, the "hatching" compartment, at the left, is separated from the "incubating" compartment at the right by a solid partition. It is evident that either expedient is the full equivalent of the other and may be used interchangeably.

[fol. 197] The Buckeye Incubator Company, licensee of Smith, in order to cater to some requests for separate hatchers, makes such a hatcher in conjunction with an incubator which contains eggs only during eighteen days. It pays royalty on those incubators, notwithstanding the fact that no eggs from the 19th to the 21st days are therein, thus recognizing that the operation for the first to the eighteenth day comes within the patent in suit.

I have read the affidavit of John J. Mullein, an employee of Robbins, filed in the Fontana Farms case. Such trend toward separate hatchers, as has been evidenced, has been fostered and encouraged by Robbins, and others, who seek

to avoid the Smith patent, but the Smith process is retained in all incubators used with the hatchers. Competent hatcherymen throughout the country continue to use Smith, Buckeye and other machines which do not have the separate hatcher, and their results are equal to, if not better than, the results secured by the users of separate hatchers.

There is no recognized distinction between the terms "hatching" and "incubation" as used by those skilled in this art at the date of the Smith patent, nor is there any distinction today, either in common usage or in scientific treaties on the subject. The Smith patent is stated to be for an "Incubator". The Supreme Court used the term interchangeably in the decisions rendered January 7, 1935. On page 1 of Exhibit 2 that Court said:

*"the Smith patent * * * for an improved apparatus and method for the incubation of eggs."*

[fol. 198] and below:

"Only so much of the patent as related to *a method for incubation* is now involved."

and then:

"The period for hatching eggs of the domestic hen is twenty-one days."

Beginning at the bottom of page 3 of Exhibit 2 that Court defined claim 1, in suit here, in the following language:

"It will be observed that the claim, standing by itself, asserts the essential elements of the method of incubation to be: (a) the arrangement of the eggs at different levels in staged incubation in a closed chamber, having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture; (b) the application to the eggs of heated air in a current created by means other than variation of temperature; and (c), as marking the boundaries of the claim, the current of air is to be of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature whereby the air will be vitalized, moisture conserved, and

units of heat carried from the eggs in the more advanced stage to those in the less advanced."

The operations carried on by the defendants in the 26-I incubators respond to every element of the claim, and the [fol. 199] Supreme Court's definition of the scope of the claim.

The Master in the Waxham case, whose opinion was affirmed by the District Court, the Circuit Court of Appeals for the Ninth Circuit, and the Supreme Court said:

"To find infringement it is only necessary to find that eggs in more than one stage of incubation, arranged at more than one level in a closed chamber with restricted openings, are subjected to the air currents previously discussed and defined."

A copy of this opinion is attached marked Exhibit 17.

It is not true, as stated by Mullein (p. 43 Fontana Record), that any Courts have required that eggs in all stages of incubation be in the incubator, for, up to the date of the papers filed by the defendants, no Courts have definitely passed upon this question. Contrary to Mr. Mullein, however, the Master stated, as quoted above, that is was only necessary to find eggs "in more than one stage of incubation" to find infringement.

Judge McCormick seemed to be under the impression that because the eggs were taken out of the incubator on the 18th day, and cooled before being placed in the hatcher, that there was some difference over the operation of the No. 23 Incubator. If so, Judge McCormick was in error, for in the operation of the No. 23 Incubator, the eggs, at the 18th day, are taken out of the turning racks and retrayed outside of the incubator in the cooler environment of the [fol. 200] hatchery room, retrayed and replaced in the incubating compartment at the left. The eggs were, therefore, subjected to the same cooling action at the same time in their development in the No. 23 incubator, as in defendants' practise.

Temporary exposure to the air with consequent cooling of the eggs for a short period does not affect the chick within the egg adversely or beneficially. The mother hen leaves her nest at frequent intervals, and the eggs cool while she

is off the nest, but no harm is done or benefit gained thereby.

There has been no delay in prosecuting the Robbins Incubator by plaintiff since the trial of that case before the Master in the Southern District of California in March, 1930, shortly after the Robbins Incubator came upon the market. On the other hand, Robbins, who conducted that case, has exerted every effort to delay and postpone the final decision in that case.

Joseph I. Taggart.

Sworn to and subscribed before me this 20th day of February, 1935. (Signed) Walter C. Kelsey, Notary Public. Com'n Expires Mar. 15, 1937. (Seal.)

Hall's Chicks

Leghorns - Reds - Rocks - Wyandottes
New Hampshire Reds - Hallcross (Crossbred) Chicks

Chicks produced from flocks tested for Pullorum Disease (B.W.D.) by the Official State Testing Agency of one of the six New England States, with
NO REACTORS FOUND
Tube Agglutination tested, within the preceding calendar year

"WELL BRED FROM WELL BREEDERS"

WALTER C. KELSEY

A GRAPH IS A SET OF FIGURES REPRESENTED PICTORIALLY

The opposite page is a Graph of our 32 weekly hatches during 1934, showing a comparison week by week with the average of the respective hatches of 1932 and 1933.

THAT GRAPH

...s a large business during the past ... a sizeable increase from the average ... two previous years; new high hatching records, owing to our having added ... capacity last Fall; and a quite even hatching of our entire capacity ... the last few weeks of the year.

Perhaps the strangest feature of the graph does not show at all. It is this: we have good reason to believe that no other hatchery in the world sold as many chicks as did Hall Brothers, during 1934; but how could this be possible, recognizing the high quality of Hall's Chicks?

...t remarkable for a Quality product to outsell those of less quality and price. ...n't have happened except for several circumstances, which couldn't be duplicated anywhere else, perhaps. Among these are:

1. Our fixed policy and determination to sell only chicks of such high quality that we feel sure of their profitableness to our customers.
2. Our record of over 20 years selling this sort of chicks, and this sort only.
3. The fact that every egg we set has been laid on a New England farm, by birds kept by some of the best poultry breeders of this up-to-date poultry section of the country.
4. The fine cooperative work which the New England Agricultural Experiment Stations have done in uniform testing and eradication of Pullorum. In no other part of the country could we find so many officially-Pullorum-Free flocks.
5. And, most important of all, the fact that here in New England and the Hallcross, poultrymen have found out that it is the Quality chick which pays.

In the West, where poultry is kept as ... on the farm, they are not pushed ... lots of they are here in the East. ... farmer keeps chickens as ... and sometimes thinks he can ... some by buying a cheap chick.

Here poultry is the main, often the only crop a poultryman raises. He studies his chicken business because it is his sole business and MUST PAY, and the Eastern poultryman knows that he MUST have a Quality chick to make money.

HALL'S CHICKS ARE PROFITABLE CHICKS

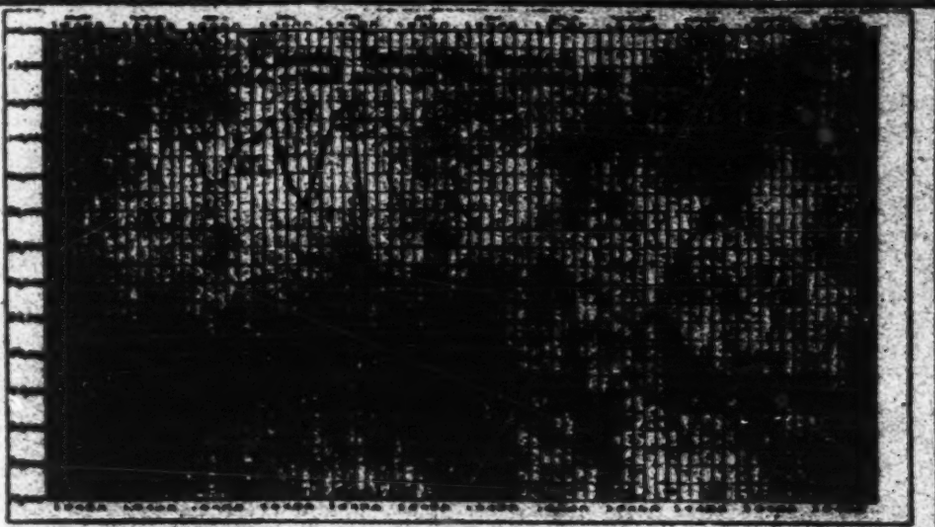
HALL BROS.
PROPRIETORS
BOX 68 WALLINGFORD, CONN.

Hall's Chicks

Leghorns - Reds - Rocks - Wyandottes
New Hampshire Reds - Hallcross (Crossbred) Chicks

All chicks produced from flocks tested for Pullorum Disease (B.W.D.) by the Official State Testing Agency of one of the six New England States, with
NO REACTORS FOUND
Tube Agglutination tested, within the preceding calendar year

"WELL BRED FROM WELL BREEDERS"



	Per Hundred	DISCOUNTS
RHODE ISLAND REDS NEW HAMPSHIRE REDS WHITE LEGHORNS WHITE HALLCROSS	14.00	
BARRED ROCKS BARRED HALLCROSS	15.00	
WHITE ROCKS WHITE WYANDOTTES	16.00	
HALLCROSS BABY COCKERELS (Guaranteed 91% Cockerels)	16.00	ALL CHICKS SHIPPED ARE 100% LIVE DELIVERY GUARANTEED.
HALLCROSS BABY PULLETS (Guaranteed 91% Pullets)	20.00	
EXTRA PREMIUM CHICKS	2c. additional per chick.	

We Ship Prepaid and guarantee safe delivery

HALL BROS.
PROPRIETORS
BOX 68 WALLINGFORD, CONN.

William Riley

Special Rubbing Meeting for Use with Seals, Bindings and Other Impressions

In a Rubbing Temperature is Accurate to a Fraction of a Degree, in All Parts of the Incubator

Patented Humidifier-Cooler Dependably Supply Both Moisture and Cooling

Reissued Oct. 31, 1933

UNITED STATES PATENT OFFICE

18,994

INCUBATOR

John L. Robbins, Hagerstown, Ohio.

Original No. 1,726,266, dated September 24, 1929, Serial No. 262,126, February 5, 1928. Application for reissue September 2, 1931. Serial No. 560,825

4 Claims. (Cl. 119—37)

This invention relates to improvements in incubators, and has reference more particularly to an improved incubator of the type described and claimed in my Patent No. 1,723,266, dated October 22, 1929.

In my present application the ventilating fans have been located at the rear of the incubator so as to blow the air transversely instead of longitudinally. It has been found that by this means a very satisfactory circulation of air is obtained and it is also possible to repair and replace the propellers without disturbing the eggs while when the propellers are located at the ends of the hatching trays, they are inaccessible and therefore very difficult to take care of.

In the drawing:

Fig. 1 is a horizontal section taken on line 1—1, Fig. 2;

Fig. 2 is a section taken on line 2—2, Fig. 1;

Fig. 3 is a front elevation looking in the direction of arrows 3 in Fig. 4;

Fig. 4 is a section taken on line 4—4, Fig. 3; and

Fig. 5 is a section taken on line 5—5, Fig. 3.

My improved incubator comprises a floor 1, a top 2, end members 3, a rear wall 4 and a front comprising doors 5, 6 and 7. The floor 1 is separated from the supporting surface 8 by means of transverse timbers 9. A partition 10 separates the interior of the incubator into two compartments, A and B. Compartment A contains the incubating trays and compartment B contains the hatching trays. For the purpose of supporting the incubating trays in such a manner that they can be tilted, I have provided a shaft 11, one end of which is journalled in the end 3, and the other of which is journalled in a transverse member 12 attached to the partition 10. The trays 13 are slidably supported between frames 14 of which four have been shown. These supporting frames are provided with cleats 15 that extend transversely of the frames and upon which the trays 13 rest. Strips 16 are secured to the rear edges of the frame members 14 and serve as stops which prevent the trays from being pushed too far. For the purpose of holding the trays against forward movement, I have secured to the front vertical members of the frames 14 a bar 17 which is provided with a plurality of longitudinal slots 18 through which the screws 19 extend. These screws are provided with wing nuts 20 and serve to clamp the bars 17 in adjusted positions. These bars are provided with lateral ears 21 that extend over the forward ends of the trays when bar 17 is in the full line position shown in Fig. 2, but which occupy the dotted line position when the bar is moved upwardly. When these bars are in the dotted line position, the trays can be pulled forward so as to be easily removed and inserted. The operation of this latching means has been quite clearly illustrated in Figs. 2, 4 and 5. Located within the incubator are electric heaters 22 by means of which the interior of the incubator is maintained at the desired temperature. As these heaters are quite universally employed and have merely been shown so as to better explain the invention, the circuit connections and manner of controlling their operation will not be described herein. Located above the heaters is a water pan 23 which serves to maintain the air within the incubator at the proper degree of humidity.

For the purpose of circulating the air within the incubator, I have provided each of the compartments with a fan. Compartment A is provided with 2 large fan blades [illegible] that are secured to a hub 24. This hub has a shaft 25 that [illegible] and is rotatable in bearing 26. A pulley 27 is secured to the outer end of the shaft and this is connected by means of belt 28 to a motor 29. A similar fan is rotatably mounted in the rear of compartment B and [illegible]

John L. Robbins.

John L. Robbins, Plaintiff, Ohio

Original No. [illegible]

[illegible]

Application for reissue [illegible]

Serial No. [illegible]

4 Claims. (Cl. [illegible])

This invention relates to improvements in incubators, and has reference more particularly to an improved incubator of the type described and claimed in my Patent No. 1,712,[illegible], dated October 22, 1929.

In my present application the ventilating fans have been located at the rear of the incubator so as to blow the air transversely instead of longitudinally. It has been found that by this means a very satisfactory circulation of air is obtained and it is also possible to repair and replace the propellers without disturbing the eggs while when the propellers are located at the ends of the hatching trays, they are inaccessible and therefore very difficult to take care of.

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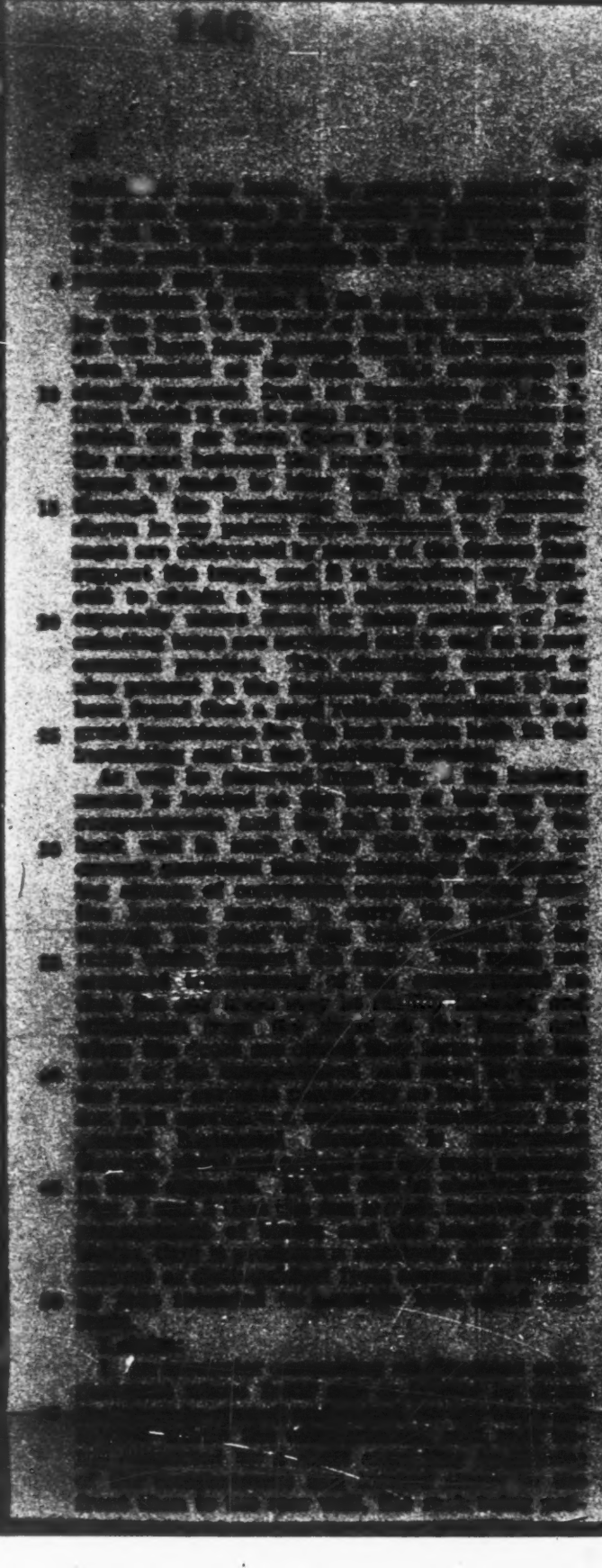
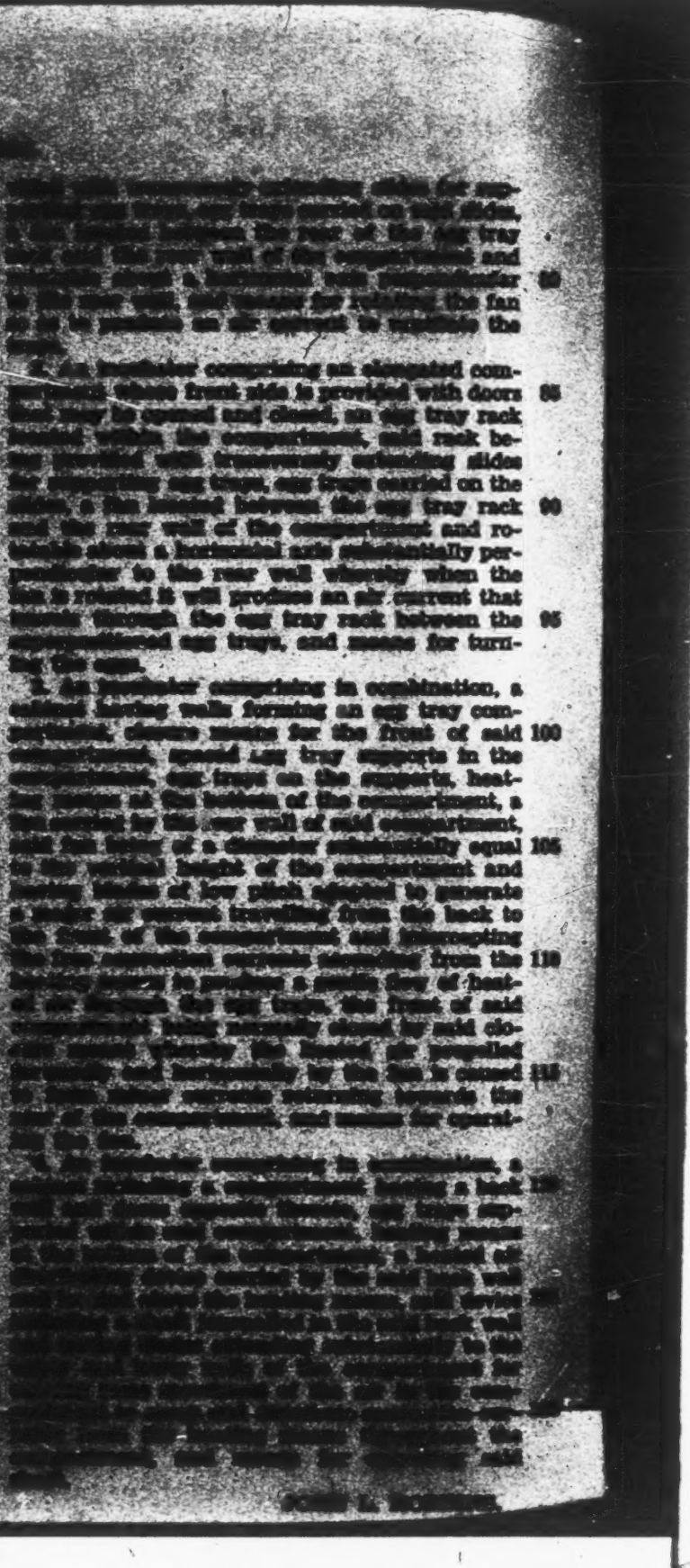
Attention is called at this point to the means employed for holding the trays in position.

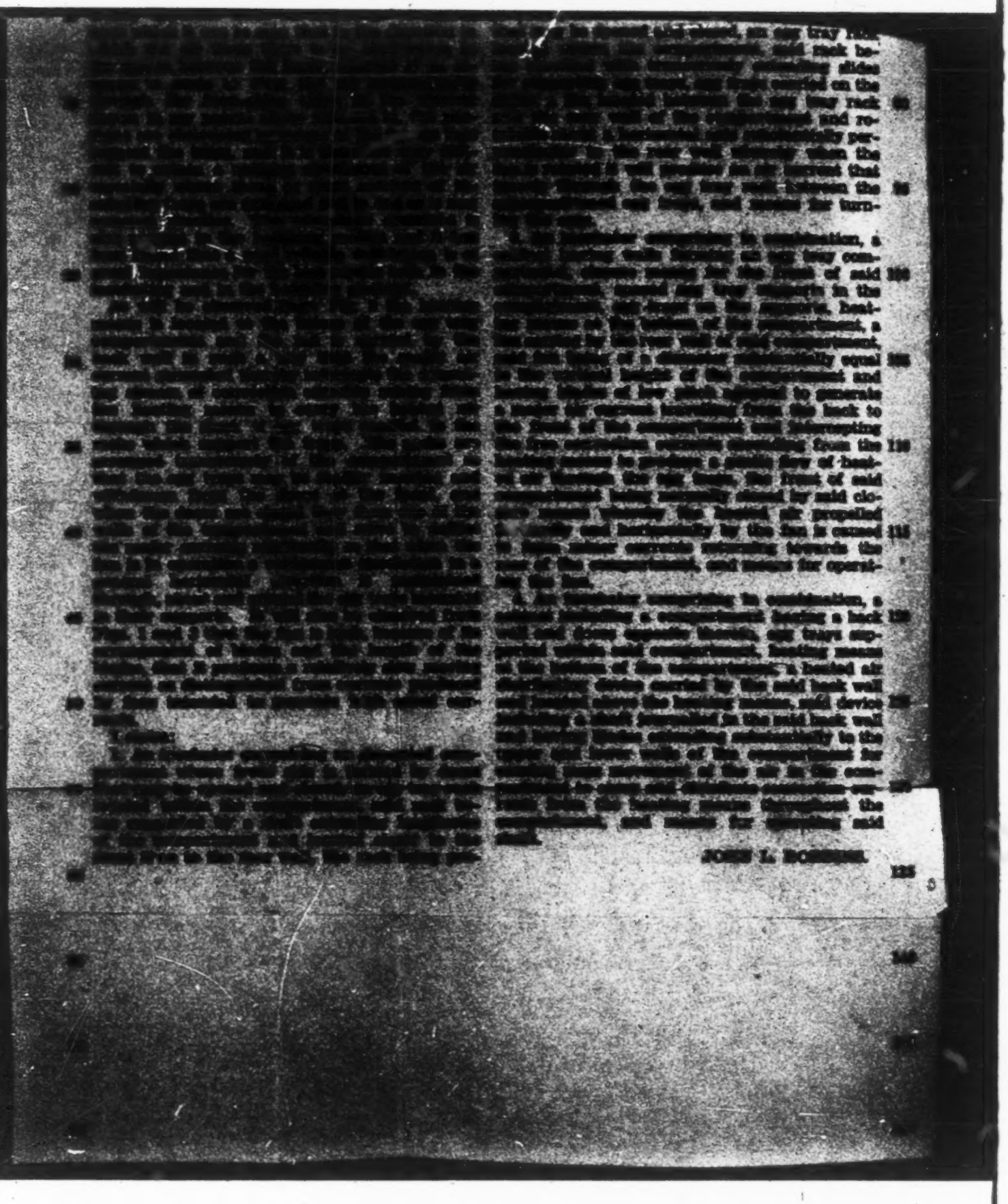
[illegible]

[illegible]

[illegible]







[fol. 206] EXHIBIT 17—WALTER C. KELLY

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF CALIFORNIA, CENTRAL DIVISION

In Equity. No. Q-69-M

SAMUEL B. SMITH and THE BUCKEYE INCUBATOR COMPANY, Plaintiffs,

vs.

HERBERT H. WAXHAM, Doing Business as WAXHAM HATCHERIES, Defendant

REPORT OF SPECIAL MASTER

To the Honorable Judges of the United States District Court for the Southern District of California, Central Division:

The undersigned, David B. Head, appointed Special Master in the above entitled cause, pursuant to an order of this Court to take and hear evidence, to make conclusions as to the facts in issue, and recommend the judgment to be entered thereon, herewith submits his report:

The Action is in equity for infringement of Letters Patent No. 1,262,860, issued to the plaintiff, Samuel B. Smith, on April 16, 1918, for an incubator. The Buckeye Incu-
[fol. 207] bator Company has been joined as a party plaintiff by reason of a license under the patent. The nominal defendant is Herbert Waxham. J. L. Robbins, who has been doing business as the Robbins Incubator Company, of Rocky Ford, Colorado, the manufacturer of the structure charged to infringe, appeared and defended the action.

Pursuant to the order of reference, the master set the cause down for the taking of testimony for March 25, 1930, at which time there appeared for the plaintiffs, Albert L. Ely, Esq., of Akron, Ohio, and Leonard Lyon, Esq., of Los Angeles, California; and for the defendant, A. J. O'Brien, Esq., Fred. Farrar, Esq., of Denver, Colorado, and W. R. Lindsey, Esq., of Los Angeles, California. Testimony was taken from day to day and on March 31, 1930, both sides rested. By stipulation the arguments of counsel

were made by the filing of briefs, and the matter was taken under submission. During the taking of testimony an inspection was made of an installation of the plaintiff's incubators at Van Nuys and Roscoe, California, and of a Robbins incubator near Gardena, California.

The plaintiffs have specified infringement of Claims 1 and 2 of the patent. The defendant has asserted the invalidity of the patent but relies mainly upon the defense of non-infringement, particularly urging a narrow construction of the claims in suit. These claims are directed to a process or method of artificially hatching eggs.

The Smith Patent No. 1,262,860 was issued with specifications and claims for both a structure and a method. It [fol. 208] is impossible arbitrarily to divorce and abstractly to consider a method or process apart from the structures used to carry it out. The structure of the patent in suit will first be considered, although the claims in issue are directed solely to the process.

The Art that is dealt with is that of artificially incubating and hatching the eggs of chickens and other fowls. Artificial incubation and hatching are very old and represent man's endeavor to imitate and even improve upon the biological function of the hen in the later stages of reproducing her kind. Chicken eggs ordinarily require twenty-one days for the process of incubation and hatching. The eggs should be kept at a temperature of not less than 100° and not more than 105° Fahrenheit. In the early stages of incubation the embryo begins using the white of the egg as food. The chemical reactions involved require oxygen and result in the giving off of carbon dioxide. As the use of oxygen increases the heat produced by the reaction also increases. Plaintiffs' Exhibit 4 shows that there is a gradual increase until the eighteenth day. Around the eighteenth day the embryo begins to consume the yolk of the egg, which results in a marked increase in the chemical reaction referred to, accompanied by a corresponding increase in the heat produced. It is to be noted that during the first eighteen days it is necessary frequently to move the position of the egg on its axis to the extent of about ninety degrees. From the eighteenth to the twenty-first day this is not necessary.

From the physical fact it is evident that the problems [fol. 209] involved in incubating and hatching eggs are:

(1) To provide means to raise the temperature of eggs in the earlier stages of incubation, and to provide means for reducing the temperature of eggs in the later stages of incubation, to the end that the eggs are kept at a temperature of not less than 100° or over 105°.

(2) To provide means for supplying oxygen to the eggs and for removing carbon dioxide from the air about them.

(3) To provide means for turning the eggs during the first eighteen days of incubation.

(4) To provide means for preventing too rapid evaporation of the moisture content of the egg, so that the embryo will not dry out too rapidly.

Without considering the prior patents in evidence and looking to the common usages of the art prior to the disclosure of the patent in suit (testimony of Taggart) it appears that artificial incubation was an old art. The problems heretofore outlined had been solved by providing closed chambers with means for artificial heating, wherein the eggs could be placed all on the same level and kept at a uniform temperature until hatched. Means were provided for turning the eggs. Due to the difficulties of temperature control that would have been encountered with larger quantities, not over five hundred eggs were placed in each en- [fol. 210] closure or cabinet. The air surrounding the eggs was kept as still as possible, giving consideration to ventilation to remove air fouled with carbon dioxide and admit air carrying oxygen. The incubators of this period worked satisfactorily. However, it was apparent that economies would result from incubators in large units, wherein a large number of eggs could be hatched, with not a great deal more care and expense than in the smaller unit. As will appear in the consideration of the patented prior art, the idea of staged incubation was not new but its practical application had not been accomplished. Staged incubation may be defined as a process of incubation wherein eggs of different stages of incubation are placed in the same inclosure, and as eggs in the later stages are hatched, new eggs are put in, and this sequence is continued progressively and indefinitely.

Directing his endeavors to the perfection of staged incubation, the patentee, one of the plaintiffs herein, developed and disclosed the structure and method of the patent.

Referring to the patent, the structure there disclosed is in the form of a large chamber in which eggs are arranged in series or tiers of trays. A central compartment or corridor, 5, extends longitudinally through the chamber with a door at one end. On both sides of the corridor are the compartments 7 and 8. In these compartments are placed a large number of trays in which the eggs to be hatched are placed. Means are provided for tilting some of the trays from one side to the other. The compartments are divided from the corridor by curtains, 3 and 4, which extend [fol. 211] almost to the floor. Electric fans, 18, are provided to force air downward to the floor of the corridor, 5, where it "mushrooms" and passes upward in the compartments, 7 and 8, through or around the trays to the space, 21, from which space it is again drawn into the fans and started on another cycle. Restricted openings, 28, permit a small amount of air to escape during circulation, which is replaced by air drawn in through openings over the fans. The limited interchange of air between the interior and exterior of the incubator together with the means provided for introducing moisture into the incubator serves to retain within the enclosure the greater percentage of the moisture given off by the eggs. This prevents the eggs from drying out too rapidly.

In operation trays of eggs are placed first in the upper stationary racks. As incubation progresses they are moved to lower tiltable racks and progressively downward until the eighteenth day, at which time they are placed in the stationary hatching racks at the bottom. As eggs are moved downward fresh eggs are placed in the top until the incubator is filled. Thereafter the process continues by the removal of the hatched chicks from the bottom, the moving of eggs downward and the placing of eggs in the top while in the central trays the eggs are moved through an arc of ninety degrees each day. The tilting of eggs is an old practice and we are not concerned with it in this case. It should be noted that the racks are shown tilted at less than 45°, but it appears in actual practice the trays are tilted to that angle. As the air circulates, ventilation occurs through the openings previously referred to. The amount of air [fol. 212] changed upon a single cycle is quite small as compared with the total volume of air, and is regulated to provide a volume of oxygen sufficient to satisfy the chemistry

of incubation. The pipes, 23, are heated by steam or hot water, and they heat the air as it passes over them on returning to the fan. Moisture jets, 26, spray water into the circulating air to maintain the proper degree of humidity within the chamber. Both heat and moisture are capable of regulation.

This structure has been placed on the market by both the patentee and the other plaintiff and has gone into widespread use. Plaintiff's Exhibit 15 shows the total gross business to have been in excess of $19,000,000.00.

The plaintiffs' commercial machine does not vary greatly from the patent except that all racks other than the lower hatching racks are tiltable, that the curtains do not extend below the bottoms of the lowest tilting racks, and that four fans are used instead of two. One of these machines was in evidence, plaintiffs' exhibit 14. It has a capacity of 52,000 eggs. The master observed certain experiments with this machine and also with machines of the same type at the Hewitt Hatchery in Van Nuys. These experiments were concerned with the measurement of the direction and velocity of the air currents while the fans were in operation. Generally these experiments confirmed the showing of Plaintiff's Exhibit 5. This shows that the air circulates in definite cycles, leaving the fans with a speed of around 1,200 linear feet per minute and passing through the egg compartments at from 120 to 40 feet per minute. The fans [fol. 213] have a total capacity of 6,000 feet per minute. The purpose of circulating the air in definite currents is to obtain a uniform temperature throughout the whole body of eggs. As pointed out before, eggs in the earlier stages of incubation must be furnished with heat and those in the later stages must be cooled by removing units of heat from them. The air circulating at considerable velocity accomplishes this by removing heat from the old eggs and transferring it to the new eggs. The patentee states:

"It, therefore, appears that the improved apparatus and method contemplates the application of hot air circulating in a column with such speed as to keep the temperature substantially uniform and so arranging the eggs that the fresh eggs are placed at one point in the column of air and held in a horizontal plane until they reach a predetermined stage of incubation and then put at a different point in the

same column of air and kept in planes inclined to the horizontal and thereafter placed at such a point in the column of air that the forced draft of air acts to hold the eggs at a uniform temperature and to prevent them from becoming overheated and thereafter placing the eggs into final position for the hatching operation."

Claims 1, 2, and 3 are directed to the method described, while Claims 4 and 5 are directed to the structure.

Claims 1 and 2 are in issue and read as follows:

[fol. 214] "1. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a current of heated air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse, and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified.

"2. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a power driven current of heated air in an adjacent chamber through openings into the egg chamber, said current being of sufficient velocity to circulate, diffuse, and maintain the air throughout the egg chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified."

"The Prior Art in evidence consists of a large number of United States and foreign patents. The patent in suit [fol. 215] has been held valid in a number of cases. As defendant's counsel points out, the validity of the patent has not been adjudicated in this district or circuit. However, there is no question but that the patent is valid, although its scope has never received complete definition.

The prior patented art may be divided into two groups: (1) incubators and (2) ventilating devices. Those in the second group have been offered as being in an analogous art. The principal reference in this group is Proctor, U. S. Patent No. 553,723, defendant's Exhibit A-15. This patent, which calls for the forced circulation of air in a closed chamber for the ordering of tobacco, appeared in 1896, and until the disclosure of the patent in suit the practice of the incubator art was to keep the air as still as possible inside the chamber where the eggs were placed. This, in itself, negatives any theory of anology between the arts. In ordering tobacco, the tobacco is placed in a chamber and air is circulated to bring the tobacco to a proper moisture content. In the Smith incubator eggs in various stages of incubation, having different heat and moisture requirements, must be kept at the proper temperature, in the proper air, with a certain moisture content. There is no analogy.

Among the patents for incubators, the German patent to Stulik (1904) defendant's Exhibit A-36, is the most pertinent. This patent discloses an incubator with a chamber in which eggs are placed in different stages of incubation. Air is drawn in from the bottom and passes by convection from new eggs to old eggs and thence out through openings in the top. Here is found staged incubation but with-[fol. 216] out a forced circulation of air, or the recirculation of air. The patent claims include only one element found in Stulik, i. e., the arrangement of eggs in different stages of incubation in a closed chamber. Stulik is not an anticipation and this reference only goes to show that it did not occur to this worker in the art to apply a forced circulation of air to eggs in different stages of incubation.

The same may be said of Zimmer, defendant's Exhibit A-29 and of the ingenious machine of Winkler, Exhibit A-6. Although all of these patents are old they do not appear to have been adopted by the art.

From a consideration of the patent and the prior art references, it is concluded that the novelty disclosed in the patent in suit is in the circulation of air by forced draft throughout a closed chamber in which eggs in different stages of incubation are placed. The idea of putting the eggs in different stages of incubation in the same chamber was old (Stulik) as was the provision for proper ventila-

tion which is common to all incubators. In the patent in suit we find a radical departure from the common practice, i. e., Smith uses a forced circulation of air where in the prior art the air was kept as still as possible, going no farther than the convection currents of Stulik.

Upon the scope of the claims defendant has argued that the file wrapper and contents of the Smith application impose specific limitations. The contention is that this limitation goes to the extent of limiting Smith to an arrangement whereby the currents of air coming from the fan must first be passed over the eggs in the last stages of incuba- [fol. 217] tion and thence over the other eggs, so that the progression is such that the newest eggs are the last to be reached by the circulating air. This must be upon a theory that the transference of heat from old to new eggs must be accomplished in one cycle. This limitation is not expressed in either of the claims, in that the claims go no further than to say that the eggs must be arranged "at different levels" and the air impelled with sufficient velocity "to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature," whereby "the units of heat will be carried from the eggs in the more advanced stages of incubation to those in a less advanced stage."

In examining the file wrapper it is found that the Smith application passed through the usual interchange of ideas and comments between the examiner and solicitor. Claims were offered and rejected. By the paper "E," the claims in suit were added and allowed without comment from the examiner. Although arguments were offered prior to that time which pointed out the specific arrangement of old and new eggs in the Smith structure and this point was before the examiner, no limitation to this specific arrangement was required as to claims 1 and 2. Having this in mind and having previously taken note of the patented prior art, if the examiner had felt that some limitation should have been imposed he surely would have answered the amendment "E." From this it is logical to assume that the examiner had reached by that time a full understanding of the disclosure and could find no reason to require such limitation. [fol. 218] The master is unable to find that the file wrapper and contents place any limitation upon the claims beyond a fair construction of their language viewed in the light of the prior art and the disclosure of the patent. There appears

to be nothing in the prior art to limit the claims to an arrangement of eggs progressively as to age from bottom to top when subjected to a forced air current. The prior art shows such an arrangement but not in combination with a forced draft.

As to the file wrapper, the case of Fullerton Walnut Growers' Assn. vs. Barngrover Manufacturing Co. (9th, C. C. A.) 166 Fed. 433, clearly states the rule,

"In the light of these authorities, it is clear that the claims of the patent, unambiguous as they are, are to be interpreted according to the meaning of their own terms, and are not to be controlled or limited by any argument or representation made in the patent office by the applicant's attorney as to the scope of the invention or the features wherein it differs from the prior art."

A method or process claim cannot be limited to the use of a specific structure to carry it out. Carnegie Steel Co. vs. Cambria Iron Co., 185 U. S. 403. It is particularly to be noted that the claims in suit are method or process claims, and that the novelty rests in the application by a forced draft of a current of air to eggs in various stages of incubation arranged at different levels in closed chambers.

It is proper to consider here the actual physical phenomena as shown in the Smith incubator in practice. The veloc- [fol. 219] ity of the air as impelled by the fans is found to be quite rapid. It is so rapid that a particle of air in a single cycle is not apt to come in contact with but a small number of the eggs in the incubating compartments. For this reason, it is not material to the process that in any one cycle one particle of air should come successively in contact with eggs in each stage of incubation. From the very nature of the process this is impossible in the Smith machine in view of the velocity of the air. However, it is essential that the air be circulated with such velocity that particles of air move around all of the eggs and that the air is so mixed and diffused that heat units are transferred through the mass, so as to maintain a uniform temperature. A uniform temperature is not maintained by a single unit carrying heat from an old egg and transferring it to a new egg, but by the whole mass being circulated, mixed and diffused so rapidly that no part of the chamber can reach a temperature materially at variance with the remainder of

the chamber. During the process heat is transferred by the medium of the air from the older hot eggs to the newer cold eggs. If we disregard the small amount of air that is constantly changing through the restricted openings, the air is circulated in closed cycles, and the order in which the eggs are arranged does not seem to affect the process, so long as the eggs are arranged at different levels so that the circulating air may reach all of them.

By including in Claim 2 reference to the application of air from one chamber to another, in contrast with the omission of such a reference in Claim 1, shows upon the face [fol. 220] of the patent an intention to limit Claim 2 to a process carried out in a machine with a separate chamber or corridor in which the air currents are generated, and it also shows a clear intention not to so limit Claim 1.

Prior Decisions.—The patent in suit has been the subject matter of extensive litigation. Several prior decisions have been urged as definitely settling certain questions raised as to the scope of the claims in suit. The same decisions in some cases are relied upon by each party insofar as they sustain their contentions. All of these decisions are in agreement in holding the patent valid. It is difficult to determine the state of facts before the various courts. In the Sixth Circuit the latest decision casts doubt upon and removes the authority of a prior decision announcing a limitation. The cases of The Buckeye Incubator Company vs. Wolfe (D. C.- 291 Fed. 253, affirmed (6th C. C. A.) 296 Fed. 680; The Buckeye Incubator Company vs. Cooley (D. C.) unreported affirmed (3rd C. C. A.) 17 Fed. (2nd) 253; The Buckeye Incubator Company vs. Stone (D. C.) unreported—all hold the patent valid and infringed without going into any questions as to the scope of Claims 1 and 2. Buckeye vs. Miller (D. C.) affirmed Fed. (2nd) turns upon an issue that is not here in point. The following cases pass upon the scope of the patent: Buckeye vs. Blum (D. C.) 17 Fed. (2nd) 456; same case (6th C. C. A.) 27 Fed. (2nd) 333; Buckeye vs. Petersime, District Court decisions unreported (6th C. C. A.) 19 Fed. (2nd) 721; Buckeye vs. Hillpot (D. C.) 22 Fed. (2nd) 855; (3rd C. C. A.) 24 Fed. (2nd) 341; Boling vs. Buckeye (D. C.) 33 Fed. (2nd) 347.

[fol. 221] The cases in this group principally are concerned with two questions:

(1) Is the patent limited to a particular character of air movement—i. e., circulation in definite channels as distinguished from agitation or churning?

(2) Must the circulating air be first propelled over the eggs in the later stages of incubation and thence to eggs in less advanced stages?

Upon the first proposition the decisions in the Blum, Petersime, and Hillpot cases are substantially in agreement. In the Blum case the District Court found that the air was agitated by paddle-wheels which gave the air no particular direction but had a churning and stirring effect. No fan-impelled currents were involved. Upon this finding a conclusion of non-infringement was reached, which was affirmed in the Circuit Court of Appeals for the Sixth Circuit. In the Petersime case the District Court found that a reel around the egg trays stirred but did not drive the air. There was no fan in the machine. This decision discussed all of the claims together, referring to the patent as a combination patent, and decides that the defendants did not infringe on one or the other of two grounds, one of which apparently was based upon a conclusion that all of the elements of the patented combination were not used by the defendant. Claims 1 and 2 were in issue, and it follows that the court was passing upon these claims. The decision was affirmed by the Circuit Court of Appeals for the Sixth Circuit.

[fol. 222] The Hillpot case differs somewhat in the state of facts from the two cases mentioned above, in that the defendant's structure showed the use of fans. However, the Circuit Court of Appeals found that although the air left the fans in a definite current, the current did not persist but instead broke up and the air wandered where it pleased. Upon this finding the judgment of the District Court holding the patent not infringed was affirmed. It follows that both the Third and Sixth Circuits are in agreement that the process of Claims 1 and 2 is limited to the use of definitely impelled currents of air as distinguished from the churning, mixing, or agitating effect of paddles or reels or of indefinable currents from fans. Upon the second proposition there is confusion in the Sixth Circuit and possible conflict between the Sixth and the Third Circuits. In the Hillpot case the District Court held that Smith had

limited his claims to "the passing of the air currents from the eggs in the more advanced stages of incubation to those in less advanced stages of incubation". It is evident that by his reference to the Petersime case in this connection the court intended to limit this to one cycle—i. e., that the air leaving the fans must pass first over the oldest eggs. While affirming the decision upon the findings discussed under the first proposition, the Circuit Court of Appeals differed from the conclusions of the District Court. The Circuit Court said (p. 344):

"But when, as in Smith, the air moves in cycles through corridor and tiers it makes no difference after the first cycle which way it moves through the egg trays, whether [fol. 223] from bottom to top or from top to bottom, or whether it first strikes warm eggs or first strikes cool eggs, for in every cycle after the first current when passing warm eggs will gather up their heat units and carry them to the cool eggs precisely as claimed and will in the same way produce that uniformity of temperature which is the thing sought by the art and achieved by the invention."

It is clear that the court found no limitation as to sequence in which the air from the fans passes over the eggs.

In the Petersime case, as before noted, the District Court found that there were no definite currents of air in the defendant's machine. In reviewing this case the Circuit Court of Appeals for the Sixth Circuit expressed the opinion that the Smith process required the air to be first passed over the older eggs. Later the same court, in passing upon the Blum case and affirming it upon the finding of an absence of definite currents, states (p. 333):

"Counsel now point out, with much force, that in a case where the air does not come in from the outside in large volume, and that in any case during the circuits after the first one, no one point in the circuit gets the air ahead of any other point, in an absolute way. Which point gets it first depends upon where we consider the circuit to begin. We think we need not consider the effect of this defect in the reasoning—if it is a defect—of our former opinion."

[fol. 224] It is reasonable to construe this language as indicating that the question is as yet undecided in the Sixth Circuit. If the expression of the court in the Petersime

case is to stand there is a conflict between the Third and the Sixth Circuits upon this proposition. The master's opinion and his finding is that there is no limitation which requires that the process claimed in Claims 1 and 2 be carried out by first passing the air currents over eggs in the later stages of incubation.

The decision in the case of Boling vs. Buckeye (supra) in the Southern District of Ohio, wherein a reversal of the air currents is held to avoid infringement, must be recognized as irreconcilable with the conclusions herein reached.

To observe one of the plaintiffs' incubators in operation, wherein 52,000 eggs are in process of incubation at one time, and compare it with the small incubators of the prior art, leads to the conclusion that Smith's disclosure was an important departure, revolutionizing the practice of an old art. It has all the earmarks of a meritorious invention and must be so credited.

The Defendant's Structure.—It was stipulated that the defendant Waxham has used a machine manufactured by J. L. Robbins and known as the Robbins incubator, Model 23. One of these machines is in evidence as plaintiffs' Exhibit 13. Exhibit 9 consists of four photographs of Exhibit 13. Plaintiffs' Exhibit 8 is the catalogue giving the manufacturers' description of the machine. It is constructed in the form of a single large compartment or chamber with doors in front. On the left-hand side are racks holding a [Fol. 225] tier of trays. In the right and central portions of the chamber a number of racks holding egg trays are mounted on an axle. The racks are so constructed that trays are arranged at different levels from top to bottom. A crank on the outside of the machine is provided to turn the axle and move the racks and trays forward 45° or rearward 45°. This turns the eggs. Upon the rear wall of the chamber are mounted two large fans. These turn upon axles extending through to the back of the wall where pulleys and belts connect them to an electric motor. Vents are provided in the top and back to permit the escape of foul air and the intake of fresh air to such an extent as to provide the incubating eggs with oxygen and remove carbon dioxide. Electric heaters and water pans are placed near the floor at the rear of the chamber. The heaters are thermostatically controlled, while the moisture is regulated by varying the amount of fresh air taken into the chamber.

Fresh eggs are placed in trays and put in the racks of the tilting section on the right. No particular order is followed, except that the user is advised not to place trays of eggs in the same stage of incubation close together. The trays once placed are not moved until the eighteenth day. At that time the eggs are placed in deeper trays and moved to the stationary or so-called hatching racks on the left. Here they are left until the chicks are hatched. As the oldest eggs are moved out of the tilting racks, fresh eggs are put in their places so that eggs, in various stages of incubation are always in the racks at different levels. The two fans at the rear are operated at a speed of around 220 revolutions [fol. 226] per minute. Being of large size they practically cover the wall of the chamber, and due to their close proximity to the wall act to drive the air centrifugally toward the sides, top, and bottom of the chamber and to draw the air inward at their center.

Due to the interpretation that Claims 1 and 2 of the patent have received, definite findings upon the exact nature of the movement of air within the chamber are necessary to determine if there is identity or equivalency between the method of Robbins and the method of Smith. The evidence on this point has been greatly clarified by the substantial agreement of the experts for both parties (Taggart and Daugherty). The plaintiff's proof is in agreement with representations made by Robbins in the case of Petersime vs. Robbins, in the District of Colorado (Plaintiffs' Exhibit 17). The master observed experiments on the Robbins machine in evidence and upon a similar machine in actual use at the Goddard Hatchery near Gardena. The air in the Robbins machine is driven outwardly from the sides of the fans and forwardly along the walls of the chamber at a speed of around 900 feet per minute. The air strikes the front wall of the chamber and turns inwardly at about 250 feet per minute. It passes through and around the trays on returning to the fans at speeds varying from 40 to 350 feet per minute, increasing as it nears the vortex of the fans to as high as 600 feet per minute. Anemometer tests in machines both empty and filled with eggs showed that the air was moving in definite paths throughout the whole mass of eggs with perhaps one exception along the left [fol. 227] edge of the stationary trays where the outgoing and incoming air forms eddies for the space extending two

or three inches across. This space is a very small part of the whole. The testimony of Taggart, based upon observation made in an empty machine, and illustrated by Exhibits 10, 11, and 12, is subject to the correction of Daugherty's Exhibits D and E, which illustrate his measurement in a machine filled with eggs. The currents, as demonstrated in a machine at Goddard's Hatchery, move in the manner illustrated by Taggart, except that there is a very definite increase of velocity and volume of air passing through the space between the hatching trays and tilting trays (line X-Y in Exhibits D and E). This current is such that little of the air driven forward at the left wall of the machine passes over the tilting trays on its return to the fan. The air upon returning to the fans is again thrown out so that in the continuing cycles at the velocity maintained all of the air within the chamber is thoroughly circulated and diffused, so that a part of the air passing along the left wall on one cycle will be thrown out in some other direction and in another current on the next cycle. Practically all of the air in machine is moving in definite measurable currents at all times. The capacity of the fans is approximately 12,000 cubic feet per minute. The temperature of the eggs is maintained within the limits necessary to successful incubation. It follows that this is done by transferring heat units from the older eggs to the newer eggs through the medium of the circulating air.

[fol. 228] Infringement.—The defendant's contentions upon the issue of infringement are several. It seems unnecessary to consider differences in structure unless those differences are such as to result in a difference in the process they carry out. Upon the point raised as to the lack of partitions in the Robbins machine, to direct the air currents in the manner of the curtains 3 and 4 in the Smith machine, it is a question as to whether or not the lack of such directing means causes the machine to function other than to

"* * * apply a current of air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs

in the more advanced stage of incubation to those in a less advanced stage."

The question is answered by the findings made as to the currents in the Robbins incubator as compared with the currents in the Smith machine. It was found that there was no substantial difference in the velocity of the currents and that in both machines there were definite currents passing through and around eggs, with the effect of keeping them at a uniform temperature. Over the eggs in the tilting trays the lowest velocities were in the neighborhood of 40 feet per minute. The absence of curtains or partitions in the Robbins machine is compensated by increased fan capacity. The two fans of Robbins have a capacity of approximately 12,000 cubic feet compared with a capacity [fol. 229] of the four in Smith of 6,000 cubic feet per minute. It is evidnt that by omitting positive directing means such as partitions Robbins has impaired the efficiency of his machine in using greater fan capacity to obtain the same velocities. That a process or structure is less efficiently applied than a patent specified is no defense to a charge of infringement,—King Ax Co. vs. Hubbard, 97 Fed. 720; Elyria Iron & Steel Co. vs. Mohegan Tube Co., 17 Fed. (2nd) 827; Standard Brands vs. Federal Yeast Corpn., 38 Fed. (2nd) 329—or that the process is carried out by an apparatus or mode differing from that specified in the patent—Tilgham vs. Proctor, 103 U. S. 707.

There appears to be no difference in the method of applying currents in the Robbins machine and that specified in the patent. The same object is in view and the results are the same, i. e., the eggs are held at a uniform temperature. The practical result of permitting incubators to be built in units of large egg capacity is attained by Smith with a 52,000 egg capacity and Robbins with a 23,000 egg capacity.

The contention that infringement is avoided because the air currents in the Robbins machine, upon leaving the fans, do not first pass over the oldest eggs is determined by the previous consideration given the subject under the discussion of the scope of the patent. To find infringement it is only necessary to find that eggs in more than one stage of incubation, arranged at more than one level in a close chamber with restricted openings, are subjected to the air currents previously discussed and defined. That the hatching

[fol. 230] eggs (eggs after the eighteenth day) are placed in separate trays not in the same tiers with other eggs, does not affect the question as long as eggs in different stages are placed at different levels in the chamber. This is done in the tilting racks.

The openings at the top and back of the Robbins machine are of such a capacity and are so used that they provide—

"for the escape of foul air without undue loss of moisture."

There has been no contention raised to the contrary.

From the above it is concluded that the defendant in the use of the Robbins incubator has infringed Claim 1 of the patent in suit.

As previously pointed out, the inclusion in Claim 2 of the language, "a power driven current of heated air in an adjacent chamber," and the failure to include such language in Claim 1, shows a clear intention to limit the claim to a process carried out in a machine with at least two distinct chambers. The Robbins machine has but a single chamber and it would be illogical to recognize a theoretical division of that chamber in view of the language of the claim. Because the Robbins machine does not drive the air from a separate chamber to the egg compartment, Claim 2 is not infringed.

Wherefore, the master finds:

1. That this is an action in equity arising under the patent laws of the United States and falling within the jurisdiction of this court;

[fol. 231] 2. That title to Letters Patent No. 1,262,860 is vested in the plaintiff, Samuel B. Smith, and that the plaintiff, The Buckeye Incubator Company, holds an exclusive license to manufacture, within certain limits, under the said Letters Patent;

3. That the said Letters Patent and, particularly, Claims 1 and 2 thereof, are good and valid in law;

4. That Claim 1 of said Letters Patent has been infringed by the defendant.

5. That Claim 2 of said Letters Patent has not been infringed by the defendant.

It is recommended that a decree be entered in conformity with this report, that an accounting of profits and damages be had, that an injunction issue against the defendant enjoining those acts herein found to infringe the patent in suit.

This report was prepared in a drafted form and submitted to counsel to permit the filing of exception and suggestions for correction. Both parties offered certain suggestions, which, in the main, have been adopted. The plaintiffs excepted to the ruling on Claim 2. This exception is denied.

Returned herewith is the file in the case together with the transcript of testimony, exhibits, and other papers relating to the proceedings on reference.

Respectfully submitted, (Signed) David B. Head,
Special Master.

[fol. 232] PLAINTIFF'S EXHIBIT No. 21

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF CONNECTICUT

In Equity. No. 2369

SAMUEL B. SMITH, Plaintiff,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS, Defendants

STIPULATION

It is hereby stipulated and agreed by and between Counsel for the parties hereto, that certified copies of testimony previously taken in other cases upon the Smith patent, to-wit:

Buckeye Incubator Co., et al. v. Cooley, D. C., N. J.;
Buckeye Incubator Co., et al. v. Archie E. Stone, District of Oregon;
Smith v. James Manufacturing Co., D. C., N, Y.;
Smith v. Street, D. C., Minnesota;

relating to the so-called "Hastings' prior use", may be offered by either party and received in evidence in the in-

stant case with the same force and effect as though it had been taken herein.

It is further stipulated and agreed by and between Counsel for the parties hereto, that the title to the patent in suit is as alleged in the Bill of Complaint, and that the plaintiff [fols. 233-254] is entitled to recover for all infringements of the patent in suit.

A. C. Ely, Attorney for Plaintiff.

Cleveland, Ohio, May 31, 1935.

Arthur E. Paige, Attorney for Defendants.

Philadelphia, Pa., June 3, 1935.

PLAINTIFF'S EXHIBIT No. 22

Opinion of Supreme Court of the United States, No. 102, October Term, 1934, omitted. Printed side page 145, ante.

[fols. 255-257] Opinion of Supreme Court of the United States, No. 208, October Term, 1934, omitted. Printed side page 167, ante.

[fol. 258] IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF CONNECTICUT

In Equity. No. 2369

SAMUEL B. SMITH, Plaintiff,

vs.

A. B. HALL and L. C. HALL, d. b. a. HALL BROTHERS, Defendants

Findings of Fact

This is a bill to restrain infringement of claim 1 of patent No. 1,262,860 granted to Samuel B. Smith April 16, 1918, and the cause is now before the Court on a motion for a preliminary injunction.

1. The validity of claim 1 of the Smith patent in suit No. 1,262,860 was sustained by a decision of the Supreme Court of the United States dated on or about the 7th day of January, 1935, and the defendants for the purposes of this case did not contest the validity of this claim.

2. The title to the patent in suit is in the plaintiff, Samuel B. Smith, a resident of Cleveland, Ohio, and the said plain-
[fol. 259] tiff is the sole party in interest and entitled to all recoveries so far as the Robbins incubators Nos. 17, 23 and 26 I, used by the defendants, are concerned.

3. The defendants, A. B. Hall and L. C. Hall, are doing business at Wallingford, Connecticut, in the hatching of eggs under the name and title Hall Brothers.

4. The defendants have used and are using in their business in the incubation of eggs incubators known as Robbins Nos. 17, 23 and 26 I, or similar incubators.

5. These incubators involve the principles of incubation set forth in claim 1 of the patent in suit.

6. The practice of removing the eggs from the incubators on or about the 18th day and placing them in a separate compartment for the balance of the full twenty-one days of the hatching period does not constitute a departure from the principles of the Smith invention as covered in claim 1 of the patent in suit.

(Sgd.) Carroll C. Hincks, United States District Judge.

February 27, 1935.

[fol. 260] IN THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF INDIANA

(New Albany Division—Transferred to Indianapolis)

In Equity. No. 89

SAMUEL B. SMITH, Plaintiff,

vs.

CLARENCE A. SIMS and CLARENCE A. SIMS d. b. a. THORNWOOD POULTRY YARDS and THORNWOOD HATCHERIES, Defendants

Pursuant to Equity Rule 70½ the Court now states its special Findings of Fact and Conclusions of Law as follows:

Findings of Fact

The Court now states the facts in the above-entitled cause to be as follows, to-wit:

(1) This is a patent suit in which the Plaintiff Samuel B. Smith, a citizen of the United States and resident of Cleveland, Ohio, charges that the Defendant, Clarence A. Sims of Crandall, Harrison County, Indiana, personally and doing business as Thornwood Poultry Yards and Thornwood Hatcheries, infringed claim 1 of Plaintiff's patent No. 1,262,860 issued to Plaintiff April 16th, 1918.

[fol. 261] (2) That Plaintiff is, and has been since April 29th, 1927, the owner of the aforesaid patent No. 1,262,860 and of all rights thereunder.

(3) Hen's eggs incubate in about 21 days. During the first ten to eleven days heat must be applied thereto to initiate the growth of the embryo. During the following seven to eight days the growth of the embyro generates heat some of which must be abstracted from the egg in order that the embyro may properly develop. By the eighteenth day the eggs may be safely withdrawn from the incubating chamber to an independent chamber where chick emergence will occur provided proper temperature and humidity are maintained.

(4) The essence of the Smith invention is the concurrent incubation of eggs in various stages of endothermic and exothermic condition in an atmosphere of heated air in movement exceeding that due solely to temperature variations in such manner as to facilitate transfer of heat from exothermic eggs to endothermic eggs.

(5) For the purpose of disclosing a manner of practicing the method defined by the claim in suit, Plaintiff's patent illustrates and describes an incubator structure comprising a chamber of room size divided by two suspended curtains, the lower ends of which are spaced above the floor, into a medial corridor and two flanking incubating compartments. In each incubating compartment are several vertical racks for the reception of interchangeable egg trays and the intermediate portion of each of these racks is so formed that [fol. 262] the egg trays therein may be tilted about horizontal axes in order that the eggs in those trays may be properly tilted, or "turned" during a desired stage of incubation. Within the chamber in the upper regions of the medial corridor are several electric fans capable of producing downwardly impelled air currents the air for which is derived from air in the upper region of the corridor, some of that air being fresh air drawn into the chamber by said fans. The air currents produced by the fans pass beneath the curtains, thence upwardly around the eggs and back to the fans, a small portion of the air passing out of the chamber through restricted openings leading from the upper regions of the incubating compartments. Within the upper part of the chamber are heating coils to furnish necessary heat and a steam supply to furnish necessary moisture.

The procedure specifically described for utilization of this structure involved initial insertion of fresh eggs in the upper regions of the incubating chambers and successive lowering of the eggs as incubation progressed until they arrived in the lower regions immediately prior to emergence of the chicks.

In the operation of this structure air heated by eggs in later stages of incubation is forcibly moved into contact with eggs in earlier stages of incubation so that heat, generated by said later eggs, is transferred to said earlier eggs.

The chicks emerged in the lower regions of the incubating compartments.

(6) Defendant has engaged in the incubation of eggs (including hen's eggs) and has utilized therein an incubator [fol. 263] structure comprising a chamber of room size having two longitudinal series of vertical racks for the reception of interchangeable egg trays, one series along each side of the chamber and spaced apart so as to form a medial corridor. Spaced along the corridor are several vertically-arranged open-ended drums or cylinders within each of which is a heating coil. Above each heating coil and within the upper end of the cylinder is an electric fan capable of producing downwardly-impelled air currents which emerge from the lower ends of said cylinders and are deflected laterally to the lower regions of the egg-tray racks. Between each pair of the above-mentioned cylinders, near the lower ends, is an electric fan each having a horizontal axis. These fans are alternately set in opposite directions, each so as to horizontally impel air currents toward an egg-tray region. There are two other horizontal-axis electric fans one at each end of the chamber beyond the end vertical cylinders and facing toward an egg-tray region and facing in a direction opposite to the next adjacent horizontal axis fan.

There are also several vertical-axis downwardly-directed electric fans in the upper part of the chamber in the vertical zones of the egg-tray racks, some along one side of the chamber and others along the other side.

Moisture-containing troughs are arranged lengthwise of the chamber in the upper part of the corridor zone and beneath each series of tray racks.

Inlets for fresh air lead through the side walls of the chamber beneath the egg-tray racks and restricted outlets for foul air lead through the side walls of the chamber from [fol. 264] points above the uppermost egg-trays.

Defendant's trays are so constructed that the eggs may be tilted or "turned" therein.

(7) Defendant has also engaged in the incubation of eggs (including hen's eggs), by utilizing therein an incubator structure comprising a chamber of room size having two longitudinal series of vertical racks for the reception of interchangeable egg trays, one series along each side of the chamber and spaced apart so as to form a medial corridor. Spaced along the corridor are several vertically-arranged open-ended drums or cylinders within each of

which is a heating coil. Within each cylinder is an upwardly-directed vertical axis electric fan capable of producing upwardly-impelled air currents which emerge from the upper ends of said cylinders and are deflected laterally by the ceiling of the chamber to the upper regions of the egg tray racks. In this instance the air supply for these upwardly-impelled air currents is drawn from the lower regions of the egg tray racks. Between each pair of the above-mentioned cylinders, at a somewhat higher level than the similar fans in the structure described in Finding No. (6), is an electric fan each having a horizontal axis. These fans are alternately set in opposite directions, each so as to horizontally impel air currents toward an egg tray region. In this structure also there are two other horizontal axis electric fans, one at each end of the chamber beyond the end vertical cylinders and facing toward an egg tray region and facing in a direction opposite to the next adjacent horizontal-axis fan. In this structure there are no vertical-[fol. 265] axis downwardly-directed electric fans. Moisture-containing troughs are arranged lengthwise of the chamber in the upper part of the corridor zone and beneath each series of tray racks.

Inlets for fresh air lead through the side walls of the chamber beneath the egg-tray racks and restricted outlets for foul air lead through the side walls of the chamber from points above the uppermost egg trays.

Defendant's trays are the same as those used in the structure described in Finding No. (6).

(8) In the utilization of the structures defined in findings (6) and (7) Defendant has inserted egg-bearing trays in the several vertical racks at time intervals and in such vertical-spacing that eggs in various stages of incubation ranging from initial introduction up to eighteen days of incubation would be vertically distributed throughout each tray-rack, in general the tray distribution being such that each tray would be vertically flanked by a tray bearing eggs in a different stage of incubation.

Trays bearing eggs which had been subjected to eighteen days of incubation were withdrawn to an independent chamber where chick emergence occurred.

(9) During the entire period of incubation, as described in findings Nos. (6), (7) and (8) the several electric fans

have been actuated to cause a forced movement of air such as to result in a transfer of heat from eggs in late states of incubation to eggs in the early stages of incubation, and such as to cause entry of a limited amount of fresh air into [fol. 266] the chamber and escape of a limited amount of foul air from the chamber without undue loss of moisture and the air throughout the chamber has been maintained substantially uniform.

(10) The prior art does not disclose the method defined by claim 1 of the patent in suit.

(11) At the time of, prior to, and since the filing of the bill of complaint herein, Defendant engaged in the use of the incubator structures described in findings Nos. (6) and (7) and engaged in the practices described in findings Nos. (6), (7) and (8) and in claim 1 of patent No. 1,262,860.

(12) Other than the incubators used by him in his business, Defendant has not manufactured or sold incubators designed to facilitate practice of the method defined by claim 1 of the patent in suit.

Conclusions of Law

Upon the foregoing Findings of Fact the Court now states its Conclusions of Law.

(1)

The Smith patent No. 1,262,860, as to claim 1 thereof is good and valid in law and Defendant has infringed the same.

(2)

That Plaintiff is entitled to an accounting from Defendant of Defendant's gains, advantages and profits resulting [fol. 267] to Defendant, since July 13, 1927, because of Defendant's aforesaid infringement, and that this cause be referred to Albert Ward as Special Master in Chancery to take and report such accounting.

(3)

That, as the patent in suit will expire April 16, 1935, no injunction should issue provided Defendant file with this

Court not later than March 13, 1935, his bond with surety to the approval of the Court, in the sum of Five Thousand Dollars conditioned that Defendant will pay to Plaintiff all damages, gains and profits to which he may be entitled from and after the date of the entry of the decree in this cause to and including the date of the expiration of the patent in suit for the infringement of such patent by Defendant. If such bond be not so filed within said time, the Plaintiff will be entitled to an injunction upon application therefor.

(4)

That Plaintiff is entitled to its costs herein to be taxed.

Robert C. Baltzell, U. S. District Judge.

March 8th, 1935.

[fol. 268] In the United States District Court for the District of Minnesota

In Equity. No. 2723

Samuel B. Smith, Plaintiff,

vs.

L. W. Street and L. W. Street d. b. a. Street's Hatchery & Poultry Farm and Street's Hatchery & Poultry Farm, Defendants

On Motion for Preliminary Injunction

Findings of Fact and Conclusions of Law

This cause came up for hearing on plaintiff's motion for preliminary injunction, affidavits and exhibits which were filed for each side and oral arguments by counsel for each side were had upon February 11, 1935, and briefs were filed by each side on February 21, 1935, and additionally defendant Street filed a supplemental affidavit on February 21, 1935.

Upon consideration of the pleadings in this case, motion papers, all affidavits, exhibits, oral arguments and briefs of counsel, the following are adopted as the Findings of Fact and Conclusions of Law:

[fol. 269] 1. Plaintiff is a citizen of the United States and a resident of Cleveland, Ohio, and so was at the commencement of this action.

2. Defendant Street individually at the commencement of this action resided at Osseo, Hennepin County, Minnesota, and still so does and defendant Street, doing business as Street's Hatchery & Poultry Farm, was at the commencement of this action and still is located at Osseo, Hennepin County, Minnesota, where defendants are engaged in and doing business in the commercial hatching of eggs.

3. That this suit arises under the patent laws of the United States and this Court has jurisdiction thereof.

4. On October 26, 1916, the plaintiff, Samuel B. Smith, filed in the United States Patent Office an application for letters patent of the United States for said improvement.

5. That prior to April 16, 1918, Samuel B. Smith assigned the right, title and interest in and to said invention and in and to any United States patent to issue thereon to The Buckeye Incubator Company, a corporation of Ohio, and that after due proceedings upon said application for patent there was issued to The Buckeye Incubator Company, aforesaid, United States Letters Patent No. 1,262,860 on April 16, 1918, whereby the exclusive right of making, using and selling the said invention and improvements throughout the United States for the term of said patent [fol. 270] was granted to The Buckeye Incubator Company, aforesaid, its successors or assigns.

6. That under date of April 29, 1927, The Buckeye Incubator Company, aforesaid, being then the owner of the title in and to the aforesaid Letters Patent, did sell, assign, and transfer to the plaintiff, Samuel B. Smith, his heirs and assigns, the right, title and interest in and to the said Letters Patent.

7. That the plaintiff and his predecessor in title, The Buckeye Incubator Company, have been at all times the sole and exclusive owners of said patent.

8. That incubators manufactured and sold by the plaintiff have been marked "Patented," with the date and number of the patent aforesaid, as required by the Statutes of the United States, and that in addition the defendants

herein were, before the commencement of this suit, duly notified in writing of the patent aforesaid and of their infringement thereof.

9. That defendant, prior to and not more than six years before the filing of the bill of complaint herein, have used in the hatching of eggs at their place of business at Osseo, Minnesota, Lower Incubators made by Lower Incubator Company of White Pigeon, Michigan, and operated them in accordance with the invention of Smith patent in suit No. 1,262,860 and are threatening to continue the use of such incubators, thereby infringing the rights of the plaintiff as secured by said patent, all without license or consent of plaintiff.

[fol. 271] 10. That by reason of the infringement complained of herein, plaintiff has suffered and is suffering loss and damage and defendants have realized profits and gains which of right belong to plaintiff.

11. The Smith patent No. 1,262,860 as to claims 1 thereof was adjudged valid and infringed by decree of this Court of February 7, 1933, in Smith v. Snow, Equity No. 2119 and following writ of certiorari issued by the Supreme Court of the United States to the Circuit Court of Appeals for the Eighth Circuit the Supreme Court by its decision of January 7, 1935 (Smith v. Snow, Docket No. 102, October Term, 1934) reversed the Appellate Court and held Claim 1 of said patent valid and infringed and following receipt of mandate to this Court by the Supreme Court, permanent injunction was again awarded and issued March 4, 1935.

12. The Smith patent No. 1,262,860 is not anticipated by any of the defenses and is valid, particularly as to Claim 1 thereof.

13. Defendants in the use of the Lower incubators shown in Plaintiff's Exhibits 5, 6 and 7 set eggs in various stages of incubation and do not avoid infringement by removing the eggs at the eighteenth day, at which time the chickens are about to emerge from the shells, because the egg-development has been by the use of two characteristic principles of the Smith invention, viz., "staged incubation" and "forced draft," and infringement is not avoided by using

the patented process less efficiently. Waxham v. Smith, [fol. 272] Docket No. 208, October Term, 1934, U. S. Supreme Court, opinion delivered January 7, 1935.

14. Defendant L. W. Street by his affidavit dated February 20, 1935, and filed in this cause on February 21, 1935, changes defendant Street's prior affidavit to represent that he did use the infringing staged incubation during the 1934 hatching season but during the 1935 hatching season asserts his intent to use only "single stage incubation."

15. Defendant Street by his affidavit dated March 5, 1935, and filed in this cause, avers that defendants herein have not on such date any eggs set in staged incubation in their hatchery and poultry farm at Osseo, Minnesota, or elsewhere.

16. This Court, having found that the patent-in-suit is valid and Claim 1 is infringed by this defendant, concludes that preliminary injunction should be awarded to enjoin and restrain defendants (until further order of this Court but in no event longer than April 16, 1935, which is the date of expiration of the patent-in-suit) from directly or indirectly infringing Claim 1 of the Smith patent-in-suit, and particularly from using in the incubation of eggs within the United States any machine of the structure exemplified in Plaintiff's Exhibits 5, 6 and 7 attached to the affidavit of Joseph I. Taggart filed herein and referred to in the motion papers as Lower incubator No. 10, or similar incubators, in such manner as to infringe Claim 1 of said Smith Patent-in-suit, save and except as to any incubator purchased [fol. 273] by defendants or any of them from The Buckeye Incubator Co. made and sold under any license or authority from the plaintiff herein.

(Sgd.) Matthew M. Joyce, United States District Judge.

St. Paul, Minnesota, March 8, 1935.

IN THE DISTRICT COURT OF THE UNITED STATES, SOUTHERN DISTRICT OF INDIANA, TERRE HAUTE DIVISION

In Equity. No. 149

SAMUEL B. SMITH, Plaintiff,

vs.

CHARLES W. JOHNSON, d. b. a. JOHNSON HATCHERY, Defendant

Findings of Fact

This cause having come on for trial, and having been heard in open Court upon testimony and upon arguments of counsel, the Court states the facts therein to be as follows, to-wit:

1. This is a patent suit in which the plaintiff Samuel B. Smith, a citizen of the United States and a resident of [fol. 274] Cleveland, Ohio, charges that defendant Charles W. Johnson, of Linton, Indiana, personally, and doing business as Johnson Hatchery, has infringed claim 1 of patent No. 1,262,860, issued April 16, 1918.

2. The plaintiff is and has been since April 29, 1927, the owner of the aforesaid patent No. 1,262,860, and of all rights thereunder, including the right to sue and all recoveries, by virtue of assignment from The Buckeye Incubator Company, of that date.

3. The period of incubation of hens eggs is twenty-one (21) days, during the first ten or eleven days of which period heat must be applied to the eggs; during the remainder of the period the eggs give off excess heat which must be removed in order to carry on successful incubation. By the eighteenth day the growth of the embyro has reached such an extent that the eggs may be safely transferred to a separate chamber where the chicks emerge from the shell, provided proper temperature and humidity are maintained.

4. The essence of the Smith invention, and of claim 1 of the patent, is the incubation of eggs in a substantially closed chamber, by subjecting a plurality of eggs in various stages of incubation to an environment of heated air in

motion, propelled by fans, or the like, so that the movement of the air is in excess of such movement as arises solely from temperature variations. The air equalizes the temperature of all the eggs, and conducts heat units from [fol. 275] eggs in a more advanced state of incubation to those in a less advanced state of incubation.

5. The patent in suit shows a particular form of apparatus for carrying on the process of claim 1, and a particular procedure, but the process set forth in claim 1 may be carried on by setting eggs in various stages of incubation in a substantially closed chamber, having restricted openings to permit limited amounts of fresh air to enter and foul air to leave the chamber, without undue loss of moisture; and propelling a current of air over said eggs; the details of the apparatus and the particular procedure set forth in the specification of the patent not being essential to the successful performance of the process of claim 1 of the patent.

6. During the six years preceding the filing of the Bill of Complaint, the defendant has operated incubators for the hatching of eggs, known as "Robbins Incubators," which are the same or similar to the Robbins Incubator which was held to be an infringement of claim 1 of the patent in suit, by the Supreme Court of the United States in Waxham v. Smith, 55 Sup. Ct. Rep. 277; by the Circuit Court of Appeals of the Ninth Circuit in Waxham v. Smith, 70 F. (2) 457.

7. The incubators used by the defendant are designated as Robbins No. 23, Robbins No. 23-H and Robbins No. 26-I.

The Robbins No. 23 incubator comprises a single cabinet provided on its rear wall with two large fans which circulate air through the cabinet in current form, the air moving [fol. 276] forwardly around the walls, ceiling and floor, and returning through the central portion of the cabinet. Small openings for the interchange of limited amounts of foul and fresh air are provided in the cabinet. In the cabinet is a large tilting drum in which egg trays are arranged in superimposed trays and in which the eggs are placed at intervals of three to four days, so that when the drum is filled it contains eggs in various stages of incubation. At the side of the tilting drum are arranged stationary racks which are approximately one-sixth of the capacity of the

tilting drum. At the eighteenth day the eggs, which have been in the tilting drum for that period, are removed to the stationary racks where the chicks hatch, in the same room.

The Robbins No. 23-H incubator is substantially the same as the No. 23, with the following exceptions: The interior of the cabinet is divided by a vertical partition into a large and small compartment. In the large compartment is located a tilting drum similar to the tilting drum in the Robbins No. 23 incubators; in the smaller compartment are arranged the stationary hatching racks similar to those in the No. 23 incubator. A single, large fan is located at the center of the rear wall in the larger compartment, and two small fans are located on the rear wall in the smaller compartment. The fan in the large compartment circulates the air in current form through the compartment, as described in the No. 23 incubator. The eggs are set in the tilting drum as described in connection with the Robbins No. 23, and are moved on the eighteenth day to the stationary racks for the hatching of the chicks.

[fol. 277] The Robbins No. 26-I differs from the Robbins No. 23 only in that the whole compartment is filled with a large tilting drum of the same design as the No. 23 or No. 23-H, in which eggs are set at the same intervals. The fan arrangement and circulation of air in the No. 26-I is the same as in the Robbins No. 23. At the eighteenth day the eggs, which have reached that stage of incubation, are removed to a separate hatching cabinet which has a capacity of one-third of a No. 26-I incubator.

8. In all of the Robbins Incubator models specified above, the air moves in all current form through eggs set at different levels in various stages of incubation, in a substantially closed chamber, having restricted openings which permit the admission of limited amounts of fresh air and escape of limited amounts of foul air, without undue loss of moisture, whereby the air will be maintained at substantially the same temperature throughout the chamber, the moisture conserved and the units of heat carried from eggs in a more advanced stage to those in a less advanced stage.

9. At the time of filing of the Bill of Complaint herein, and prior thereto, the defendant has been engaged in the incubation of eggs in which he has utilized the incuba-

structures and has engaged in the practises described in paragraph 7, and as covered by Claim 1 of the patent in suit.

(Sgd.) Robert C. Baltzell.

[fol. 278] Conclusions of Law

Upon the foregoing Findings of Fact the Court now states its conclusions of law:

(I)

The Smith patent No. 1,262,860, as to claim 1 thereof, is good and valid in law, and Defendant has infringed the same.

(II)

Plaintiff is entitled to an accounting from Defendant of Defendant's gains, advantages and profits resulting from the infringement of the patent, and this cause be referred to Albert Ward as Special Master in Chancery, to take and report such accounting.

(III)

As the patent in suit expired April 16, 1935, no injunction shall issue.

(IV)

The plaintiff is entitled to his costs herein to be taxed.

(Sgd.) Robert C. Baltzell, U. S. D. J.

Indianapolis, Ind., April 26, 1935.

[fol. 279] UNITED STATES DISTRICT COURT, DISTRICT OF MINNESOTA, FOURTH DIVISION

Equity. No. 2723

SAMUEL B. SMITH, Plaintiff,

vs.

L. W. STREET and L. W. STREET, Doing Business as STREET'S HATCHERY & POULTRY FARM, Defendants

Findings of Fact and Conclusions of Law

This cause came duly on for hearing before the undersigned, one of the judges of said court, and was tried to the court on the 18th and 19th days of April, 1935, at the Federal Building, in the city of Minneapolis, state of Minnesota.

Appearances:

Ely and Barrow of Cleveland, Ohio, and Paul, Paul & Moore appeared for the plaintiff; Chappell & Earl and Williamson and Williamson appeared for the defendants.

After considering all of the files and records herein, the evidence adduced at the trial and the arguments of counsel, the court concludes and finds as follows:

Findings of Fact

1. Plaintiff is a citizen of the United States and a resident of Cleveland, Ohio, and so was at the commencement of this action.

[fol. 280] 2. Defendant Street individually at the commencement of this action resided at Osseo, Hennepin County, Minnesota, and still so does and defendant Street, doing business as Street's Hatchery & Poultry Farm and Street's Hatchery & Poultry Farm, was at the commencement of this action and still is, located at Osseo, Hennepin County, Minnesota, where defendants are engaged, and doing business, in the commercial hatching of eggs.

3. That this suit arises under the patent laws of the United States and this Court has jurisdiction thereof.

4. That the defense of this cause was initially conducted by C. M. Lower Incubator Company of White Pigeon, Michigan, and is now conducted by Lower Incubator Corporation of White Pigeon, Michigan, which purchased the assets of said C. M. Lower Incubator Company.

5. On October 26, 1916, plaintiff, Samuel B. Smith, filed in the United States Patent Office, an application for Letters-Patent of the United States for Improvements in Incubators.

6. That prior to April 16, 1918, Samuel B. Smith assigned the right, title and interest in and to said invention and in and to any United States Patent to issue thereon to The Buckeye Incubator Company, a corporation of Ohio, and that, after due proceedings upon said application for patent, there was issued to The Buckeye Incubator Company aforesaid, United States Letters-Patent No. 1,262,860 [fol. 281] on April 16, 1918, whereby the exclusive right of making, using and selling said invention and improvements throughout the United States for the term of said patent were granted to The Buckeye Incubator Company, aforesaid, its successors or assigns.

7. That on April 29, 1927, The Buckeye Incubator Company reassigned said patent to plaintiff, Samuel B. Smith, together with all claims and demands in law or equity for past infringement and the right to sue and recover therefor.

8. On April 29, 1927, contemporaneously with the reassignment of said patent and said invention to plaintiff, Samuel B. Smith, The Buckeye Incubator Company, aforesaid, and said Samuel B. Smith entered into two contracts, one granting a license to The Buckeye Incubator Company for the manufacture and sale of incubators under said patent, which incubators have an egg capacity of sixteen thousand five hundred (16,500) eggs and under, said licence being exclusive in The Buckeye Incubator Company for incubators of these sizes, and the second contract being one under the terms of which the duty of bringing suits for all infringements and the rights to all recoveries were vested in the plaintiff, Samuel B. Smith, regardless of the size of the infringing incubators and, therefore, The Buckeye Incubator Company was not a necessary party to this action.

9. That plaintiff and his predecessor in title, The Buckeye Incubator Company, have been at all times the sole and exclusive owners of said patent.

[fol. 282] 10. That defendants, prior to and not more than six (6) years before the filing of the bill of complaint herein, have used in the hatching of eggs at their place of business at Osseo, Hennepin County, Minnesota, six (6) Lower incubators, each having a stated capacity of seven thousand nine hundred twenty eggs (7,920) in the incubating compartment and two thousand six hundred forty (2,640) eggs in the hatching compartment, which incubators were made by C. M. Lower Incubator Company of White Pigeon, Michigan, and operated them in accordance with the invention of the Smith patent-in-suit No. 1,262,860, thereby infringing the rights of plaintiff as secured by said patent, all without the license and consent of plaintiff.

11. That said Lower incubator used by the defendants herein, comprises an incubating compartment having restricted openings for the escape of limited amounts of foul air and the intake of corresponding amounts of fresh air, and in which eggs were arranged in superposed tiers and subjected to the action of currents of air generated by a fan located within the incubating compartment; and that defendants have set eggs in said incubating compartments in staged incubation, and in the operation of said incubators the temperature of the incubating compartments was equalized by the carrying of units of heat from eggs in a later stage of incubation to those in an earlier stage; and that removing the eggs from the incubating compartment on the eighteenth (18th) day and transferring them to a separate compartment for the completion of the hatching operation did not, and does not, avoid Claim 1 of the Smith [fol. 283] patent-in-suit but did and does constitute infringement thereof.

12. That by reason of the infringement complained of herein, plaintiff has suffered loss and damage and defendants have realized profits and gains which of right belong to plaintiff.

13. The Smith patent-in-suit No. 1,262,860 is not anticipated by the prior art and is valid as to Claim 1 thereof.

14. That no additional evidence has been presented in regard to the alleged Hastings prior use which in any way adds to previous testimony in regard thereto which has been offered in the following cases:

(1) Buckeye Incubator Co. v. Wolf, 291 Fed. 253 (N. D. Ohio W. D.), affirmed, 296 Fed. 650 (C. C. A. 6th), (2) Buckeye Incubator Co., et al. v. Cooley (D. N. J., unreported), affirmed 17 Fed. (2d) 463 (C. C. A. 3d), (3) Buckeye Incubator Co., et al. v. Stone (D. Oregon, Maguire, Special Master, unreported), (4) Smith v. Sims, et al. (S. D. Indiana, J. Baltzell, unreported),

and that said evidence as to said alleged Hastings use fails to establish an anticipation of Claim 1 of the patent-in-suit and shows that the prior attempts of Hastings to solve the problem of mass incubation did not embody the principles of the Smith invention and were failures and abandoned by Hastings and those associated with him, and the so-[fol. 284] called Hastings use does not anticipate the invention of Claim 1 of the Smith patent-in-suit.

15. Claim 1 of the Smith patent-in-suit was held valid and infringed by the Supreme Court of the United States in the case of Smith v. Snow, et al., 55 S. Ct. 279; 79 L. ed. 283, and also in the case of Waxham v. Smith, 55 S. Ct. 277; 79 L. ed. 293, and that in the case of Smith v. Snow, the decision of the Supreme Court defined the invention of the Smith patent as follows:

"(a) the arrangement of the eggs at different levels in staged incubation in a closed chamber, having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture; (b) the application to the eggs of heated air in a current created by means other than variation of temperature; and (c), as marking the boundaries of the claim, the current of air is to be of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature whereby the air will be vitalized, moisture conserved, and the units of heat carried from the eggs in the more advanced stages to those in the less advanced."

And further, the Supreme Court said, in the same opinion

"it is plain from what has been said that the character of the patent and its commercial and practical success are such [fol. 285] as to entitle the inventor to broad claims and to a liberal construction of those which he has made."

that the practice of incubation in Lower No. 10 incubator used by these defendants comes within the scope of Claim 1 as defined by the Supreme Court.

16. That defendants do not avoid infringement of Claim 1 of the Smith patent because the egg-development has been by the use of two characteristic principles of the Smith invention, viz., "staged incubation" and "forced draft," and infringement is not avoided by using the patented process less efficiently. Waxham v. Smith, 55 S. Ct. 277; 79 L. ed. 293.

17. That the Smith patent-in-suit having expired April 16, 1935, permanent injunction is not awarded.

18. That the preliminary injunction heretofore awarded plaintiff in this cause and which expired April 16, 1935, was not improvidently granted and therefore the bond or undertaking heretofore filed herein by plaintiff may be released.

Conclusions of Law

1. That plaintiff is entitled to recover from the defendant the profits, gains and advantages which said defendants have received, or which may have accrued to them by reason of their infringement of Claim 1 of said Smith patent-in-suit No. 1,262,860, of April 16, 1918.

2. That plaintiff is entitled to have this cause referred to a Master for an accounting and it is hereby referred to Howard S. Abbott, as Special Master of this Court, Room [fol. 286] 314 Federal Building, Minneapolis, Minnesota, who is hereby appointed to ascertain, state and report to the court a true and correct account of the extent of the infringement by the said defendants, or any thereof, of said Claim 1 of said Smith patent No. 1,262,860, and also the amount of the gains, profits and advantages which said defendants have received from said infringement of Claim 1 of said patent, and the amount of damages, which said plaintiff has suffered, if any, by reason of said infringement of said defendants of Claim 1 of said patent, and the plain-

tiff, on said accounting, shall have the right to cause examination of the officers, servants, agents and employes of said defendants, ore tenus, or otherwise, and also to examine other witnesses and to cause production and examination of the books, vouchers and documents of said defendants and to have all necessary process of the court to compel such attendance and production before said Special Master, at such times and places as he shall, from time to time, direct.

3. That plaintiff is entitled to recover from said defendants the taxable costs of the plaintiff in this Court and that plaintiff is entitled to have judgment and execution against said defendants for said costs.

4. That an interlocutory decree be submitted in accordance with these Findings of Fact and Conclusions of Law,

Dated at Minneapolis, Minnesota, this 1st day of May, 1935.

Joseph W. Molyneaux, United States District Judge.

[fol. 287] The defendants' requests for Findings of Fact and Conclusions of Law are hereby denied and defendants are given an exception to the ruling of the court.

Joseph W. Molyneaux, United States District Judge.

In the United States District Court for the Western District of Oklahoma

No. 1628 E

Samuel Smith, Plaintiff,

vs.

R. W. Hankins, d. b. a. Hankins' Hatchery & Dairy, Defendant

Findings of Fact and Conclusions of Law

This cause having come on for trial, and having been heard in open court, and the Court being fully advised in the premises, the Court states the following Findings of Fact and Conclusions of Law:

Findings of Fact

I

This is a patent suit in which the plaintiff, Samuel B. Smith, a citizen of the United States and a resident of [fol. 288] Cleveland, Ohio, charges that defendant, R. W. Hankins of Alva, Oklahoma, personally, and doing business as Hankins Hatchery & Dairy, has infringed claim 1 of patent No. 1,262,860, issued April 16, 1918.

II

The plaintiff is, and has been since April 29, 1927, the owner of the entire right, title and interest in the said patent together with the right to sue to recover all recoveries for infringement of the said patent.

III

The patent in suit is valid, particularly as to claim 1 thereof.

IV

During the period of six years prior to the filing of the Bill of Complaint herein and until the issuance of the restraining order in this case on April 4, 1935, the defendant has operated, in the commercial hatching of eggs, at his place of business at Alva, Oklahoma, incubators known as Robbins No. 23 and Robbins No. 23-H.

V

Defendant has also sold and/or leased four other incubators, known as the Robbins No. 23, during the period of six years prior to the filing of the Bill of Complaint herein.

VI

The Robbins No. 23 Incubator referred to in paragraphs IV and V hereof, is identical with the incubator held to be [fol. 289] an infringement of Claim 1 of the patent in suit, in the decision of the Supreme Court of the United States in Waxham v. Smith, 55 Sup. Ct. Rep. 277. It comprises a single chamber in which are located a large tilting egg drum in which eggs are set at intervals of approximately

three days, and stationary hatching racks to which the eggs are transferred on the eighteenth day for the hatching of the chicks. The No. 23-H incubator is substantially the same as the No. 23 incubator except that the stationary hatching racks are separated from the tilting drum by a vertical partition. The eggs in the tilting drum are set at the same intervals. In each of said incubators No. 23 and 23-H the air is propelled in current form through the tilting egg drum by a large fan, or fans, and the chambers are provided with small openings for the intake of fresh air and exhaust of foul air.

VII

Claim 1 of the patent in suit has been infringed by the operations of the Robbins No. 23 Incubator by the defendant in the manner described in paragraph 6 hereof; the defendant has not avoided claim 1 by transferring the eggs on the 18th day of the hatching period to a separate hatching chamber, but has also infringed upon the said claim in the operation of the Robbins No. 23-H in the manner described in the said paragraph.

VIII

The defendant has also infringed upon the patent in suit, either directly or contributorily, by the sale and/or leas- [fol. 290] ing of Robbins No. 23 Incubators, as set forth in paragraph V hereof.

IX

The Incubators manufactured and sold by the plaintiff and its licensee, The Buckeye Incubator Company, have at all times been marked "Patented" with the date and number of the patent in suit; and in addition the defendant has been duly notified in writing of the patent and his infringement thereof.

X

The manufacturer of the Robbins Incubators referred to above, The Robbins Incubator Company, engaged counsel for the defendant, prepared the answer filed herein and otherwise directed and controlled the defense of this suit

preparatory to the final hearing, but did not appear or defend the action at the hearing.

XI

By reason of the infringements complained of and specified in paragraphs VII and VIII hereof, the plaintiff has suffered loss and damage and the defendant has realized profits and gains which of right belong to the plaintiff.

Upon the foregoing Findings of Fact, the Court now states the following:

Conclusions of Law

I

The Smith patent 1,262,860 as to claim 1 thereof is good and valid in law.

[fol. 291]

II

The defendant has infringed upon the same.

III

Plaintiff is entitled to an accounting from the defendant of defendant's gains, profits and advantages, and to the damages suffered by the plaintiff by reason of the infringement of the said patent.

IV

That this cause be referred to the Hon. James B. Cullison, as Special Master in Chancery, to take and report such accounting with his recommendations therein, subject to review by this Court, and the plaintiff shall be entitled to adequate processes of this Court to recover such amount as shall be awarded herein.

V

As the patent in suit expired April 16, 1935, no injunction shall issue.

VI

The plaintiff is entitled to his costs in this cause herein to be taxed.

Edgar S. Vaught, U. S. District Judge.

Oklahoma City, Oklahoma, May 2, 1935.

[fol. 292] UNITED STATES DISTRICT COURT, EASTERN DISTRICT OF WISCONSIN

In Equity. Civil Docket 4387

SAMUEL B. SMITH, Plaintiff,

vs.

F. J. LE MIEUX, LA PLANT HATCHERIES, Defendants

Findings of Fact and Conclusions of Law

This cause having come on for trial and having been heard in open Court upon the pleadings, testimony of witnesses, and arguments of counsel, and the Court being fully advised in the premises, and upon consideration thereof, states as follows:

Findings of Fact

1. That the parties are residents and citizens respectively as alleged in the Bill of Complaint.

2. That Patent No. 1,262,860 was issued April 16, 1918, to The Buckeye Incubator Company, a corporation of Ohio, and was assigned to the plaintiff on April 29, 1927, together with all rights to sue for infringement and to recover therefor.

3. That infringement of claim 1 of the above patent is alleged, and that the said claim is valid, and that Samuel B. [fol. 293] Smith was the first, sole, true, and original inventor of the improved method of hatching eggs described in said patent and set forth particularly in claim 1 thereof.

4. That the defendants during the period of 6 years prior to the filing of the Bill of Complaint and since that time, have owned and operated at their places of business at Green Bay, West Bend, Clintonville, Sawyer, Gillett, and Watertown, Wisconsin, certain incubators known and designated as follows:

Robbins No. 19

Robbins No. 23 both with and without separate hatching compartments

Robbins No. 26-I

and have operated such incubators by setting the eggs therein in staged incubation, i. e., setting fractional parts of the incubator at intervals of from three to four days.

5. That the incubators enumerated in paragraph 4 hereof are the same or substantially the same in construction and mode of operation as the Robbins incubators No. 23 which were involved in the case of Waxham vs. Smith, reported in 55 Sup. Ct. Rep. 277.

6. That the defendants have not avoided infringement upon the process described in the Smith patent and set forth in claim 1 thereof by separating the hatching compartment from the incubating compartment or by placing a partition therebetween, in the Robbins No. 23 incubators, nor by removing the eggs from the Robbins No. 26-I in-
[fol. 294] cubators on the 18th day of the incubating period and placing them in a separate cabinet or chamber for the balance of the hatching period.

7. That the Smith patent in suit covering the process of hatching or incubating eggs by placing them in staged incubation in a cabinet or room provided with restricted openings for the interchange of limited amounts of foul and fresh air, and having fans or the like to produce sufficient current movement of the air to maintain the temperature of the incubator substantially uniform throughout, is entitled to a liberal interpretation, and is of sufficient scope to cover all of defendants' operations of said Robbins incubators.

8. That the patent in suit is not invalid either for incorrectly or incompletely disclosing the principles of the invention.

9. That the defendants have infringed claim 1 of the patent in suit by the operation of the incubators listed in paragraphs 4 and 6.

10. That the defense herein has been conducted by the manufacturer, the Robbins Incubator Co., of Denver, Colorado, which directed and prepared the Answer and engaged counsel to defend the case and participated in the trial thereof.

11. That the patent in suit having expired April 16, 1918, no injunction shall issue.

12. That the preliminary injunction heretofore awarded [fol. 295] plaintiff in this cause, and which expired April 16, 1935, was not improvidently granted.

Conclusions of Law

1. That claim 1 of patent No. 1,262,860 is valid and has been infringed by the defendants.

2. That plaintiff is entitled to recover the gains, profits, and advantages which defendants have received and the damages which plaintiffs have suffered.

3. Plaintiff is entitled to recover the taxable cost to be assessed against the defendants and to have judgment and execution against the defendants therefor.

4. That the bond filed herein by the plaintiff be released.

5. That an interlocutory decree be submitted in accordance herewith.

F. A. Geiger, United States District Judge.

Milwaukee, Wisconsin, May 14, 1935.

[fol. 296] In the United States District Court, Western District of Missouri, Western Division

In Equity. No. 2682

Samuel B. Smith, Plaintiff,

vs.

Fred Boehm, d. b. a. Garden City Hatchery, Defendant

Findings of Fact and Conclusions of Law

This cause having come on for trial and having been heard in open court and the Court being fully advised in the premises, the Court states the following Findings of Fact and Conclusions of Law:

Findings of Fact

I

This is a patent suit in which the plaintiff, Samuel B. Smith, is the owner of the patent in suit and the defendant,

Fred Boehm, is a resident of Garden City, Cass County, Missouri, where he operates and has operated during the period of six years prior to the filing of the Bill of Complaint, a commercial hatchery under the name of Garden City Hatchery.

[fol. 297] II

The patent in suit is valid, particularly as to claim 1 thereof.

III

During the period of six years prior to the filing of the Bill of Complaint herein the defendant has operated one or more incubators known as Robbins #23 incubators.

IV

The defendant has infringed upon claim 1 of the patent in suit by the operation of the Robbins #23 incubators.

V

By reason of the infringement complained of and stated in paragraphs III and IV, the defendant has realized profits which of right belong to the plaintiff.

Conclusions of Law

I

The patent in suit and claim 1 is valid and defendant has infringed the same.

II

Plaintiff is entitled to an accounting from the defendant of defendant's profits realized by the defendant in infringement of claim 1 of the patent in suit.

[fol. 298] III

As the patent in suit expired April 16, 1935, no injunction shall issue.

IV

That this cause be referred to Robert B. McCreight as Special Master in Chancery, to take and report such accounting and the amount of profits which the defendant has received from the infringement of claim 1 of the patent.

V

The plaintiff is entitled to his costs in this cause to be taxed.

VI

That an interlocutory decree be submitted in accordance herewith.

Merrill E. Otis, United States District Judge.

May 23, 1935.

[fol. 299] In the United States District Court, Eastern District of Michigan, Northern Division

In Equity. No. 555

Samuel B. Smith, Plaintiff,

v.

F. Kribs and Herbert L. Kribs, d. b. a. Fred's Hatchery, Defendants

Final Decree

(Filed May 29, 1935)

This cause having come on for hearing and having been heard in open court, the Court being advised as to the premises, it is hereby Ordered, Adjudged and Decreed:

1. That the patent in suit, No. 1,262,860, dated April 16, 1918, is valid, particularly as to Claim 1 thereof.

2. That the defendants have infringed Claim 1 of said patent by the use during the period of six years prior to the filing of the bill of complaint of incubators known as Robbins No. 26-I incubators.

[fol. 300] 3. The parties having reached a settlement no accounting will be ordered herein.

4. Each party shall pay its own costs.

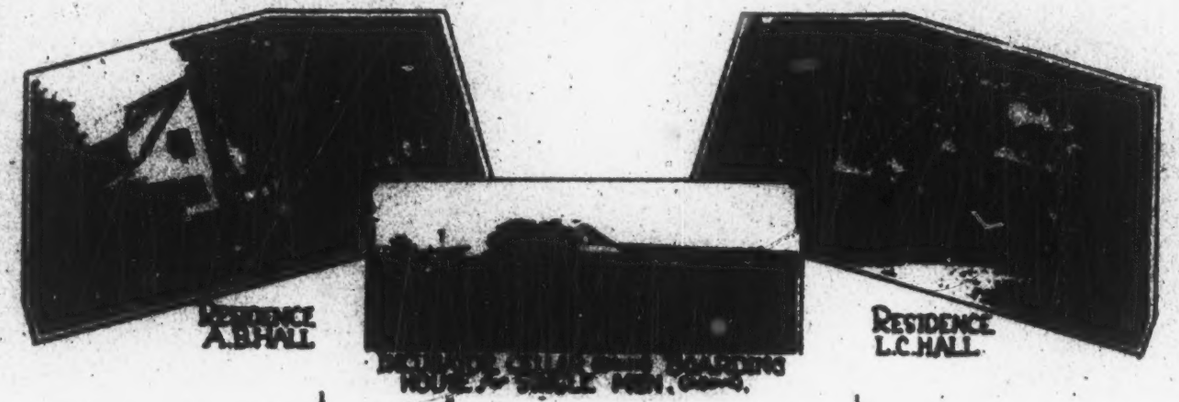
(Signed) Arthur C. Tuttle, U. S. District Judge.

Bay City, Michigan, May 29, 1935.

Approved as to form: A. L. Ely, Counsel for Plaintiff. [illegible] & Des Jardins, Counsel for Defendants.

PLAINTIFF'S EXHIBIT No. 23

Hall Brothers Have One of the Finest Breeding Farms in New England



RESIDENCE A.B.HALL

RESIDENCE L.C.HALL

HALL BROTHERS OPERATED 10 ROBBINS' INCUBATORS LAST SEASON OR 215,000 CAPACITY.

THERE IS ANOTHER STORY OF SUPERIOR QUALITY, EASIER OPERATION AND LOWERED COSTS.

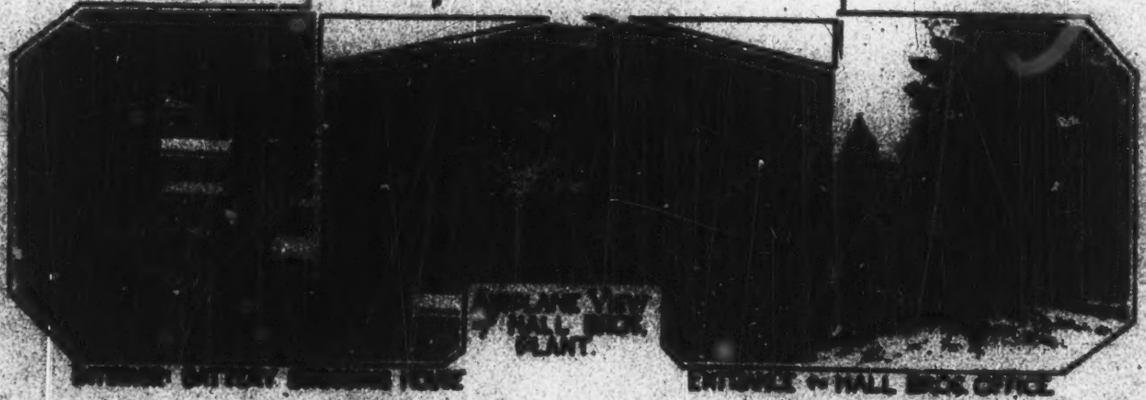
Hall Brothers

POPLAR HILL FARM

Wallingford, Conn.

EXTERIOR of BROODER HOUSE

INCUBATOR CELLAR



AERIAL VIEW of HALL BROS. PLANT.

EXTERIOR of HALL BROS. OFFICE.

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PLAINTIFF'S EXHIBIT No. 24

15% Increase in 1931 due to Growing Demand for Robbins chicks — Hall Brothers had 16 Robbins Incubators for the season of 1931 and have purchased 3 more for 1932!

A. B. HALL L. C. HALL

Hall Brothers

POPLAR HILL FARM
Wallingford, Conn.

June 10th, 1931.

The Robbins Incubator Company,
1500 Stout Street,
Denver, Colo.

Dear Sirs:

Our operations during the past season have been entirely with Robbins Incubators, and we are pleased to report a very satisfactory season.

As you know, we added two 400 chick-hatchers, making a total of over 200,000 egg capacity. We have placed but the very best results with the first and last, and we are of the opinion that the entire industry is just a little slower to operate in that we also obtained the same amount of hatch during the lengthening period, and also reduce the possibility of hatching time to the hatched point. We feel that we have obtained slightly better hatches and greater uniformity, if that were possible, with this new equipment.

On our old machines we have used the pan hatch and the humidifiers when we had a large hatch coming, and have been able to fully operate to their capacity without the necessity of a third hatch.

We do practically no custom hatching, but the demand for our chicks has increased very fast, so that our total output for this year will show a 15% increase over last year. We are glad to report that our customers have had all we can fully supply, and are willing to give the Robbins Incubators credit for producing chicks which are at least equal and in a large number of cases superior to those produced on any other machine.

Wishing you continued success, we are

Very truly yours,

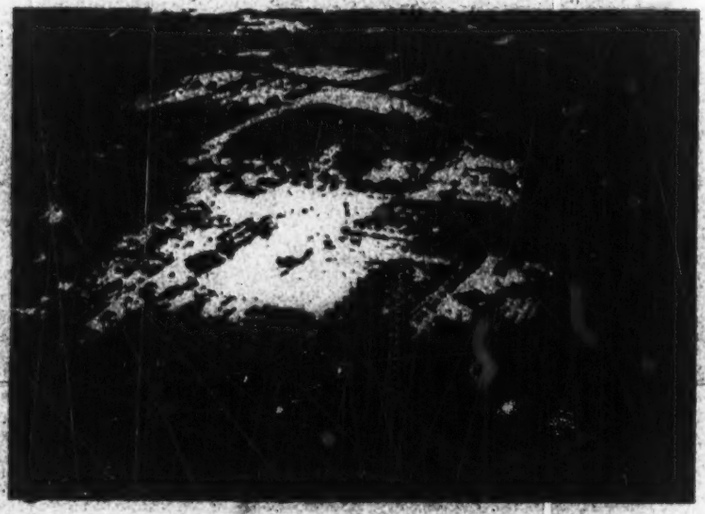
HALL BROTHERS.

A. B. Hall

Patent, Ex. No.
U. S. Dist. Court,
Dist. of Conn.
7 193.

These Hall Brothers are air-minded.

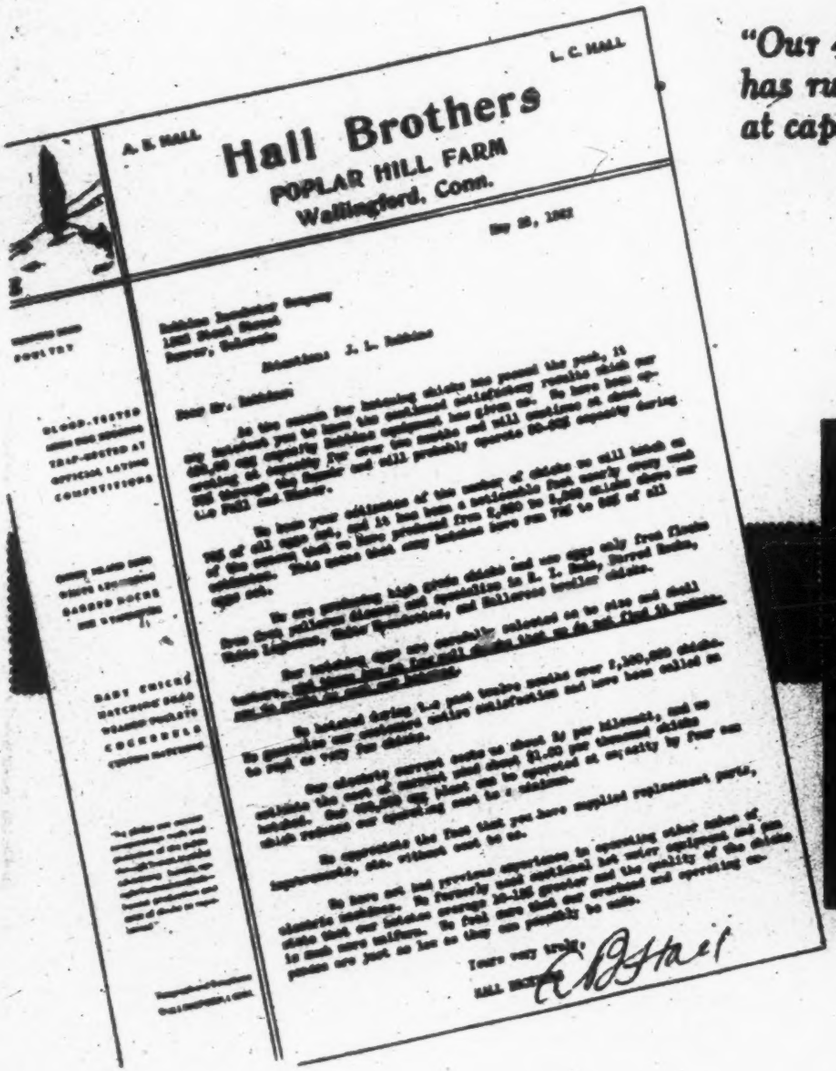
Below is an airplane view of Poplar Hill Farm. A. B. Hall went to the Louisville Convention of I. B. C. A. by airship.



Hall Brothers are thoroly acquainted with the Robbins Multi Incubator-Hatcher. This report contains interesting comments on results.

302

196



A. E. HALL — L. C. HALL

Hall Brothers

POPLAR HILL FARM

Wallingford, Conn.

May 28, 1952

Robbins Incubator Company
1201 Ninth Street
Denver, Colorado

Attention: J. L. Robbins

Dear Mr. Robbins:

At the season for hatching chicks has passed the peak, it is needless for us to have the continued satisfactory results which we are enjoying Robbins equipment has given us. We have been operating at capacity for over two months and will continue at about [illegible] through the summer and will probably operate 50-60% capacity during [illegible] and winter.

In both your estimates of the number of chicks we will hatch on the 400,000 egg unit, and it has been a noticeable fact nearly every week of this season that we have produced from 2,000 to 5,000 chicks above our estimates. This means that our hatches have run 75% to 85% of all eggs set.

We are producing high grade chicks and are eggs only from flocks free from pullorum disease and specialize in R. I. Reds, Barred Rocks, White Leghorns, White Plymouth Rocks, and Hollywood broiler chicks.

Our hatching eggs are carefully selected as to size and shell texture, [illegible] and are set in the best clean [illegible] all chicks are sold on the basis of chicks that hatch.

We hatched during 1-2 peak months over 2,100,000 chicks. To guarantee our customers entire satisfaction and have been called on to hatch as many for chicks.

Our chicks average weigh at about 2½ per kilowatt, and we estimate the cost of current used about $1.00 per thousand chicks hatched. Our 400,000 egg plant can be operated at capacity by four men which reduces our operating cost to a minimum.

We appreciate the fact that you have supplied replacement parts, [illegible] etc. without cost to us.

We have not had previous experience in operating other makes of chicks incubators. We formerly used mechanical hot water equipment and can state that our Robbins averages 20-25% greater and the quality of the chicks is much more uniform. We find more than one advantage in your equipment we just as low as they can possibly be sold.

Yours very truly,

HALL BROTHERS

E. B. Hall

"Our 400,000 egg capacity Robbins equipment has run 75% to 85% of eggs set, and operated at capacity by only four men."

Hatched 2,100,000 chicks in 12 months... and practically no replacements.

Airplane view of Hall Brothers' Poplar Hill Farm, one of New England's finest breeding farms.

PLAINTIFF'S EXHIBIT No. 25

PLAINTIFF'S EXHIBIT No. 28

How Would You Like to Be Able to Write a Check for $5,000.00 as Part Payment for 250,000 Additional Incubating Capacity?

HALL BROTHERS No. 11951
BABY CHICKS

Wallingford, Conn. Oct. 6th 1933

Pay to the order of The Robbins Incubator Co. $5000.00

Five thousand and 00/100 Dollars

To The First National Bank
Wallingford, Conn.

HALL BROTHERS

A. B. HALL, who wrote this check, also wrote: "The excellent results we have secured with Robbins Incubators in the last five years have had much to do with our splendid growth in the hatchery business."

In another letter, this summer, Mr. Hall wrote: "We value our Robbins equipment very highly, as we have been able to maintain the quality of our chicks and increase our volume in spite of very keen competition."

HALL BROTHERS *Chicks*
Wallingford Conn.

October 6th, 1933

Robbins Incubator Company
1888 Stout Street
Denver, Colorado

Dear Sirs:

We are enclosing our check for $5,000.00 as agreed, to be applied against our purchase of one-quarter million egg capacity in the new Robbins Model 68.

The excellent results we have secured with Robbins incubators in the last fifty years have had much to do with our splendid growth in the hatchery business.

After buying our first Robbins incubators we conducted hatching tests with them in competition with our sectional machines. We found the Robbins produced 10% to 20% larger hatches, and better quality chicks. From a conservative Yankee standpoint, we realized we could not afford to waste time trying to sell our sectional machines, in order to make room for Robbins equipment; therefore we junked them without delay.

We steadily increased our Robbins equipment until we had 450,000 capacity. Our records for last year show we produced 75% to 80% high-grade chicks from all eggs set. We run at full capacity with only four men, and never had to keep a night man on the job at all. (We used to need six men to operate only 160,000 capacity in our sectional machines).

This summer we had booked orders for over one-half million chicks for shipment before January, 1934, and saw we needed more incubation in August. We measured the makes at the Grand Rapids Convention in August. We measured their same-as-modern claims against Robbins proven results. We examined the many improvements made in the Robbins since we bought our first one in 1888.

Although we could have purchased other machines for less money, we decided to, and did, place our order with you for 250,000 additional Robbins capacity, because we were sure it would not in any other way invest the same amount of money in incubating equipment to equal advantage. We are confident this decision will prove as profitable and satisfactory to us as our original decision to buy a Robbins years ago.

Yours very truly,

HALL BROTHERS

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PLAINTIFF'S EXHIBIT No. 27

305

OBBINS NEWS

...r Co. SEPTEMBER, 1934 Boyne, Colorado

Batcherymen's Answer To The Big, Bad Wolf

...EVERY YEAR, it seems, just before or ... the I. B. C. A. Convention, owner of our ... manage to "work up" some propaganda ... benefit of Convention visitors, in the ... with the sole of Robbins Incu...

...efforts have quite uniformly failed in the ... they have proved boomerangs to those ... them as much as batcherymen. "Let ... Hatch, Hatch your Robbins leadership ... and more dividends." Nevertheless, ... to learn from experience, there ... continue their efforts.

... the business, one Incubator Company ... one Robbins move for an injunction, ... restrainment, or what-not.

... is the Answer—

... sales of Robbins Incu... were made at the Cleve... Convention this summer ... any I. B. C. A. Conven... 1929!

... And most of them were ... as batcherymen living in ... —the state where our ... factories are lo...

The Same Old Racket

Some Straight Talk About Litigation and The Smith Incubator Company

THE HATCHERY INDUSTRY as a whole is in conflict with the owners of the Smith and Sullivan Incubator Companies, in which the Robbins Incubator Company is vitally interested, because of the recent suit of Smith against Robbins, Sullivan and others, including Hatcherymen from Minnesota and a Mr. [illegible] from California.

Other incubator companies are also using this patent litigation, in a desperate attempt to confuse their customers and hinder the sale of the preferred Robbins machines.

What Are the FACTS?

Smith recently lost a U. S. Circuit Court case regarding his patent. He also won a Circuit Court case affirming the same patent. Because of the conflict between these two decisions, and other questions which unfortunately are too technical to discuss here, Smith was obliged to appeal his case to the United States Supreme Court for review.

Smith's attorneys have literally admitted the conflict between the decision in the California case, and decisions of other Circuit Courts on the Smith patent. Having no alternative, they have necessarily in requesting the U. S. Supreme Court to review the case.

This confirms the opinion we have often expressed that the Supreme Court ultimately would have the opportunity to [illegible] the question of the Smith patent against Smith's contentions, and we are now convinced it is possible at this time that the case will be so decided that the Continuous Hatch will be overthrown.

[illegible] and all other [illegible] incubators are now [illegible] on the outcome of Smith's suit against Robbins. [illegible] of the California decision, and the [illegible] Smith's petition for review by the Supreme Court, [illegible] to make the decision [illegible] Smith patent, [illegible] Robbins, Sullivan and other [illegible] would immediately have to quit the field.

What Would You Do, If You Were In Smith's Place?

What would you do under similar circumstances? If you were in Smith's place, would you [illegible] your case to the Supreme Court [illegible] a chance to win on the facts, and [illegible] the [illegible] of the lower courts? Or would you [illegible] the lower court's decision, [illegible] your business [illegible] accept, and attempt to [illegible] the [illegible] which [illegible] Smith [illegible] Robbins, Sullivan and other [illegible] Hatcherymen [illegible] Smith [illegible] Would you [illegible] your [illegible] in [illegible] of the Robbins [illegible] would you [illegible]?

Would you run around, [illegible] and [illegible] at everyone who gets in your way? Or would you [illegible]

the rights of owners who, unreasonable animals, and much the chief residence of the owner?

After all, this is the United States. It is no crime to operate a duplicate incubator over seven other roofs. In fact, a good many intelligent people think it is a sign of good business sense and excellent judgment to do so!

Why Has Smith Never Sued Robbins?

A NOTHER QUESTION that naturally arises is: Why hasn't Smith sued the Robbins Incubator Company, instead of scattered individual users of Robbins machines?

If you were a manufacturer, and you thought some competitor was infringing your patent, you would sue that competitor, wouldn't you? You wouldn't go out of your way to "pick on" his widely separated customers.

Smith has consistently avoided litigation with the Robbins Incubator Company, not only in Colorado, which is our home territory, but even in Ohio, which is his own home territory. He knows a damage suit there would result in (what is still pending), but even there Smith refused to enter a cross-complaint for infringement against us. He was hold voluntarily aside under the jurisdiction of the courts in his own district.

Can it be that Smith is more interested in *propaganda and intimidation* than he is in a direct, clear-cut legal determination of the issues involved? *Can it be that Smith looks confidence in the justice of his cause*, but nevertheless believes he can accomplish thru threats, indirectly, what he may be unable to accomplish through the courts, directly?

The Smith Patent Will Soon Be "Dead as a Door Nail"—It Expires in April

In the meantime, instead of calmly awaiting the orderly settlement of this controversy by the Courts, some [illegible] salesmen seem to be in opposition of a hurry to spread propaganda while the spreading is good. They have told [illegible] that Robbins has stopped making machines, that in another year there won't be any more Robbins Incubators—and another fairy tales.

All this in connection remember, when it is remembered that Smith's patent No. 1,230,049 expires April 16, 1917—only several short months from now. The patent cannot be renewed. After that date it will be a good buy. This is the patent, you remember, to which the Robbins Company, as well as Smith's license, [illegible] machines.

So if any *hatcheryman considering the purchase of an incubator is worried about what values the machine is likely to have in a year or two*, a great deal could be said on this subject—and it would NOT concern ROBBINS Incubators.

Publishing the April expiration of this patent explains the [illegible] appearing at some of the recent meetings our competitors. Maybe they have [illegible] over the world to extend it some months. NOW is when they can, while the "scare-stuff" is still good.

In the meantime, back to ahead of the big, but we'll [illegible] a word about [illegible] are going here!

Robbins Machines Are Sold Only on MERIT

SO FAR AS THE ROBBINS Incubator Company is concerned, we are willing to sell our machines entirely on the basis of their thinking efficiency. We are anxious to be business, but not on sentiment, that we will agree to make concessions, substitutions or allowances, in an effort to make sales. We don't try to "persuade" our hatcheryman to buy a Robbins by hitting him over the head with a club—sentimental or otherwise—or by holding a gun to his stomach.

You can't hatch chicks with hornets.

If our competitors would spend as much time, energy and money in perfecting their incubators, more closely to approach Robbins efficiency, as they spend in their lies and propaganda, they and the entire industry would be better off.

But they have been subtly trying to "keep Robbins" for so long, with an occult attempt that Robbins has succeeded to get stronger and stronger, you will hardly blame them for wishing you had [illegible] when their patent expires.

It Takes Incubators, Not Lawsuits, to Hatch Chicks

Hundreds of clear-thinking, successful hatcherymen, whose combined experience covers every make of incubator built, have found that the Robbins offers most for their money, and greatest profit on the investment. These hatcherymen have bought, operated, and made money with, Robbins equipment, despite the fact that some of our competitors have been making horrid faces at them for years, and continue to do so.

A machine that can rise to leadership—as the Robbins has done—under these conditions, and that receives such constant attention from competitors, MUST have something other incubators don't have!

Investigate impartially and completely—do your own thinking—and you'll buy a Robbins.

Sincerely,

John L. Robbins

President, The Robbins Incubator Co.

A. B. Hall's Answer to The Big, Bad Wolf

HALL BROTHERS No. 14170

Wallingford, Conn. Aug 25 1934

Pay to the order of Robbins Incubator Co $500 00

Five Thousand ——— 00/100 Dollars

The First National Bank

Wallingford, Conn.

HALL BROTHERS

A B Hall

HALL BROTHERS Chicks

Wallingford Conn.

August 25th. 1934.

Robbins Incubator Company,
1823 Stout Street,
Denver, Colorado.

Attention: J. L. Robbins

Dear Sirs:

As per our letter of July 30th we have definitely decided to place order for model 412E, and are enclosing a deposit check for $5,000.00.

With this addition we will have about 750,000 egg capacity, all in Robbins Incubators. We will expect delivery by October 1st, 1934, and will use these machines at once to fill orders already booked for Fall delivery on Barred Rollcross broiler chicks.

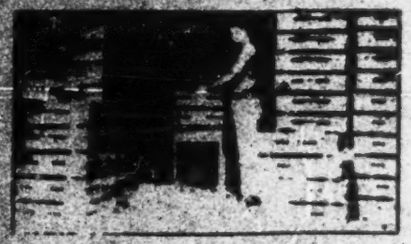
ABH:H
Enc.

Yours very truly,

A. B. Hall

Ten Years Growth of a Connecticut Hatchery

(Continued from Page 80)



FASTER GROWTH!

ELMORE'S CHIXSAVER

CHICK STARTER

IDEAL FOOD FOR BABY CHICKS

Increasing quality along with quantity.

The inauguration of our Bonus system of paying for hatching eggs has stimulated a new interest among our producers. For many years we paid a flat premium over a regular market. A few years ago we introduced the Bonus Relief Book, the plan still pays the same regular premium but also pays a bonus on a sliding scale for increases in hatchability over 65%. It also calls for a reduction in price for hatchability under 60% to 50%. This has tended to place a certain amount of responsibility for hatchability and quality squarely on the shoulders of the producer. It is most interesting to note the response.

Our increase in volume has necessitated some few changes in buildings, equipment and personnel. In 1932 we added an additional 200,000 incubator capacity. This increase was found to be inadequate, so it was necessary to add another 150,000 last Fall, giving us a total of 750,000 egg capacity or a volume of 150,000 chicks each week when running at full capacity.

With the 1932 increase of a quarter of a million incubator capacity and the resultant increase in chicks emptying on with eggs, we decided to add a Poultry Specialist to our staff. We finally persuaded Ralph Willard to join our organization. Mr. Willard graduated from the Connecticut State College with the class of 1928, and had the advantage of five and a half years of Successful Poultry training with Roy E. Jones. During this period as Assistant Extension Poultryman, he had the privilege of surveying and helping many Connecticut breeders with their poultry problems.

Mr. Willard was then Secretary of Performance Improvement, and in 1930 to 1932 was one of the state leaders in the Pullorum Elimination Program. He then also had considerable practical experience, and for two years worked for breeding under Dr. Stanley A. Jull of the U. S. D. A. Our Poultry Specialist has brought to the organization a valuable knowledge and ability which has proved itself in the year and a half of its association with us.

The 1933 addition featured the construction of a new building, 20 by 32 ft. on the ground level in the basement under. Besides a new office and with two other basements, additional equipment. Last Fall we added one of our old original colony houses to provide for the increase in the new unit of 10,000 pullets on range.

With each new addition it has been necessary to increase our personnel, and this year again, the new unit of 10,000 pullets on range, and the increase in our hatching capacity, has made it necessary to add to our staff. We have a waiting list of over fifty producers who are anxious to supply us with hatching eggs. This fact alone helps materially in maintaining and increasing our quality.

The Railway Express Agency at Wallingford is credible and visible testimony of the increase in the business at Poplar Hill Farm. It was not many years ago that one small shipping room was large enough to accommodate the baby chicks at the depot before being shipped. These quarters gradually became cramped and another room was pressed into service. The last two years has again shown the need of more spacious accommodations for holding chicks until train time, and recently the main waiting room of the station has been commandeered to provide proper holding facilities.

Hatching is now a continuous process at Poplar Hill Farm and has been the case for eight years. This step has been necessary to take care of the demands of the broilermen who keep broilers of chicks coming along at all times of the year. Many of them have standing orders for each three to six week intervals, and, of course, must be catered to in order not to upset their breeding schedules.

The last ten years has seen a great change in demand of various breeds. For broiler purposes the chick demand has changed sharply from Barred Rocks to Barred Hollbrook. Like many new ideas, Barred Hollbrook chicks were tried in secret to test the results along with the straight Rock chicks. The broilermen saw the difference in mortality, rate of growth, and efficiency of feeding, and were quick to take advantage of the hybrid vigor factor. For a couple of years now we have sold more Barred Hollbrook than Barred Rocks for broiler purposes.

White Hollbrook are now being sold widely for Leghorn Broiler production for the frozen trade. These Crosses have the advantage of white feathers plus that of the fast growing vigor and often equal Leghorns in egg and chick production and vigor.

Many Pullets have become a reality in the last ten years, due primarily to the development of pullorum in breeding. Like other animals, the hen and pullet was attacked by disease germs which were destroyed or controlled by the development of immunity. Then came the day of the chemical production and feed control of the pullorum organism, there was a demand for the pullet that would produce eggs the year through. Many breeders had been keeping their pullets for a year to get enough eggs to make it worth while to hatch them.

Another opportunity arising in the breed of the last few years has been in the improvement of the shape of the body. A few years ago the ideal shape was a long body, with a long deep keel. Many of the breeders who have attempted to breed for this shape have found that the chicks were not as vigorous as the chicks with the shorter body and deeper keel. Many breeders have found that the chicks with the shorter body and deeper keel were more vigorous and produced more eggs.

At the prize level in broilers between breed, broiler organization and progress and open shelters was held by the New Hampshire breeders in the production and egg plan. The advantageous features of the New Hampshire breeders developed strains of chicks vigorous breeders that were noted for their low chick mortality, rapid feathering, and economic growth. Much progress was made along these lines and New Hampshires were in much demand.

Many breeders developed strains of chicks vigorous breeders that were noted for their low chick mortality, rapid feathering, and economic growth. Much progress was made along these lines and New Hampshires were in much demand.

ELMORE'S CHIXSAVER

CHICK STARTER

IDEAL FOOD FOR BABY CHICKS

ELMORE MILLING CO., INC., Cheshire, N. Y.

PLAINTIFF'S EXHIBIT No. 29

311

Smith's Chickagrams

Chicago, August, 1930 No. 8

SAMUEL B. SMITH

[illegible] owner and president of [illegible] Smith Incubator Co. [illegible] Smith Brooder Co. [illegible] Smith Chickagrams [illegible] Smith Poultry Farm.

SMITH'S CHICKAGRAMS [illegible] Monthly from the Office of [illegible] S. WHITE COMPANY 35 South Clark Street Chicago, Illinois

[illegible] It is sometimes valuable [illegible] interesting about The Smith Incubator Company, Cleveland, [illegible], and [illegible], which [illegible] as a whole. The only reason is to contribute each [illegible] based on personal experience [illegible] years, profits, the good and [illegible], and to forward information [illegible] used or reproduced not only [illegible] publications, but by others in [illegible] of which may form an advertisement [illegible] of many value or disinterested [illegible] to the reader.

[illegible] the cooperation of every [illegible] as well as everyone interested [illegible] poultry industry in the end [illegible] Chickagrams may serve the [illegible]

[illegible] communications to SMITH'S CHICKAGRAMS [illegible] South Clark Street, Chicago [illegible] SMITH INCUBATOR CO. [illegible] Cleveland, Ohio

Plan Advertising Well

Plan now to put pep into your advertising campaign. Every sales dollar is the most part of life days to the building up of the industry of which he is a part," as said Theodore Roosevelt; and businessmen can do no better than heed the wisdom of this great leader. It is not a bit too early to begin to plan for next year's advertising if you expect to help yourself and the industry to which you belong.

Even President Hoover admits that advertising is one of the great assurances of future. Its value is measured chiefly by the thought, care and attention put into it. You can make your advertising most valuable by giving it real serious attention.

Look about you. Consider the successful businessmen that you know. In practically every case these successful businessmen are systematic, and give more or less extensive advertising. They plan their campaigns with wisdom and thoroughness; they intensify to make their advertising appealing; they do not think as a bit or miss plan, regarding every advertisement as being there a young friend; they are in the long run, knowing the rewards at the end to be greater.

Some of our wisest manufacturers make it their regular policy to formulate their advertising plans [illegible] year. They do this because they know that advertising is one of the big items of [illegible] In some instances, [illegible] the advertising itself, must be [illegible] months; otherwise it will not [illegible]

It is well to get good advertising counsel. Advertising counsel from [illegible] agencies is found to [illegible] and ability. Many a businessman [illegible] success to the [illegible] and [illegible] given by his advertising counsel.

Probably the greatest evil in business [illegible] is the disregard for [illegible] should not be any great difficulty in [illegible] advertising appeal on a good [illegible] With knowledge of [illegible] and of [illegible] a businessman, a [illegible] artists and his advertising counsel should be able to plan a systematic campaign that can be shown [illegible] appeal to produce real results in the way of [illegible]

Make up your mind now that your next season's advertising appropriation is going to be made wisely; that it is going to produce as good results as possible immediately, but that some of the results must be looked for in the future. It is just good business to try to [illegible] about you.

IMPORTANT COURT DECISION

User of Robbins Incubator Held to Infringe Smith Patent Rights

On July 3, 1930, a decision was rendered in the United States Court of the Southern District of California, holding a user of a Robbins Incubator liable for infringement of United States Letters Patent No. 1,262,868, owned by Samuel B. Smith, President of The Smith Incubator Company of Cleveland, Ohio.

The Patent Laws of the United States hold anyone responsible for damages who makes, uses, or sells a device which is held to infringe the rights of the owner of a patent.

[fols. 312 & 313] PLAINTIFF'S EXHIBIT No. 30

August 10, 1932.

Hall Bros., Wallingford, Conn.

GENTLEMEN:

It has been brought to the attention of Samuel B. Smith, the owner of United States Letters Patent No. 1,262,860, that you have been using incubators which are known as Robbins Incubators, manufactured and sold or furnished to you by John L. Robbins, doing business as Robbins Incubator Company of Denver and Edgewater, Colorado.

For your information, I am enclosing herewith copy of final decree entered on August 2, 1932, in the United States District Court for the Southern District of California. This decree holds that Herbert H. Waxham, a Robbins user, has infringed Claim 1 of United States Letters Patent No. 1,262,860, by the use of a Robbins Incubator.

This is to formally notify you that by your use of Robbins Incubators you are infringing United States Letters Patent No. 1,262,860, owned by Samuel B. Smith of Cleveland, Ohio, and, further, that you may be held liable to Samuel B. Smith aforesaid for future as well as past infringement of the patent.

If you do not fully understand your responsibility in this matter, my suggestion is that you consult a patent lawyer.

In the event that you desire any further information concerning this infringement matter, address your correspond-
[fol. 314] ence to Samuel B. Smith or the writer at the office of The Smith Incubator Company, 3108 West 121st Street, Cleveland, Ohio.

Very truly yours, George C. McConnaughey, Attorney for Samuel B. Smith.

gcm-ecc.
enc.
Registered Letter.
(Return receipt attached.)

[fol. 315] PLAINTIFF'S EXHIBIT No. 31

April 11, 1934.

Hall Bros., Wallingford, Conn.

GENTLEMEN:

On August 10, 1932, we notified you that the use of Robbins Incubators had been held to infringe the Smith Patent No. 1,262,860 by the District Court in the Southern District of California in the case pending against Herbert H. Waxham, a Robbins user. You are now advised that the Circuit Court of Appeals of the Ninth Circuit has on Monday, April 9, 1934, affirmed the decision of the Master and the District Court in the case.

We are advised that you are and have been for some time using one or more Robbins Incubators. Use of these incubators constitute an infringement of the Smith Patent, and you are hereby notified to discontinue at once and to account for damages to S. B. Smith, the owner of the patent.

Unless prompt action is taken by you and a satisfactory settlement made, suit will be brought against you for the infringement of the patent and application made for injunction preventing your further use of the Robbins Incubators.

Very truly yours, George C. McConnaughey, Attorney for Samuel B. Smith.

gcm-eab.
Registered Letter.
(Return receipt attached.)

(Here follows 1 photo, side folio 316)

PLAINTIFF'S EXHIBIT No. 32 316

[fols. 317-354] Defendant's Exhibit "F" omitted in printing as it appears at side folio 1010 of the James record.

[fol. 355] DEFENDANTS' EXHIBIT H

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEW JERSEY

In Equity. No. 2026

BUCKEYE INCUBATOR COMPANY and SAMUEL B. SMITH

vs.

WILLIAM F. HILLPOT

Final Decree

(Filed September 3, 1927)

This cause came on to be further heard at the April Term of this Court, upon the pleadings and proofs, and was argued by counsel for the respective parties, and thereupon, upon consideration thereof, it was

Ordered, Adjudged and Decreed, First, that defendant has not infringed plaintiff Smith's Patent No. 1,262,860. Second, that said patent does not disclose a successful method of operation and, consequently, method claims 1 and 2 thereof are invalid and void. Third, that the bill of complaint be dismissed. Fourth, that plaintiffs have not infringed defendant's claim 8 of Hillpot Patent No. 1,489,597. Fifth, that plaintiffs have not infringed defendant's claims 1 or 2 of Hillpot Patent No. 1,545,425. Sixth, that [fol. 356] defendant's counterclaim be dismissed. Seventh, that the parties shall pay their respective costs.

J. L. Bodine, U. S. D. J.

Approved as to form: ——, Counsel for Plaintiffs.
Arthur E. Paige, Counsel for Defendant.

UNITED STATES OF AMERICA,
Eastern District of Pennsylvania,
Third Judicial Circuit, set:

I, Wm. P. Rowland, Clerk of the United States Circuit Court of Appeals for the Third Circuit, do hereby certify

the foregoing to be a true and faithful copy of the final decree of the District Court of the United States for the District of New Jersey, as the same appears in the transcript of record on appeals from the said Court in the case of Buckeye Incubator Company and Samuel B. Smith, vs. William F. Hillpot, No. 2026 in Equity (C. C. A. Nos. 3697 and 3698), on file, and now remaining among the records of the said Court, in my office.

In Testimony Whereof, I have hereunto subscribed my name and affixed the seal of the said Court, at Philadelphia, this 20th day of June, in the year of our Lord one thousand nine hundred and thirty-five and of the Independence of the United States the one hundred and fifty-ninth.

Wm. P. Rowland, Clerk of the U. S. Circuit Court of Appeals, Third Circuit. (Seal.)

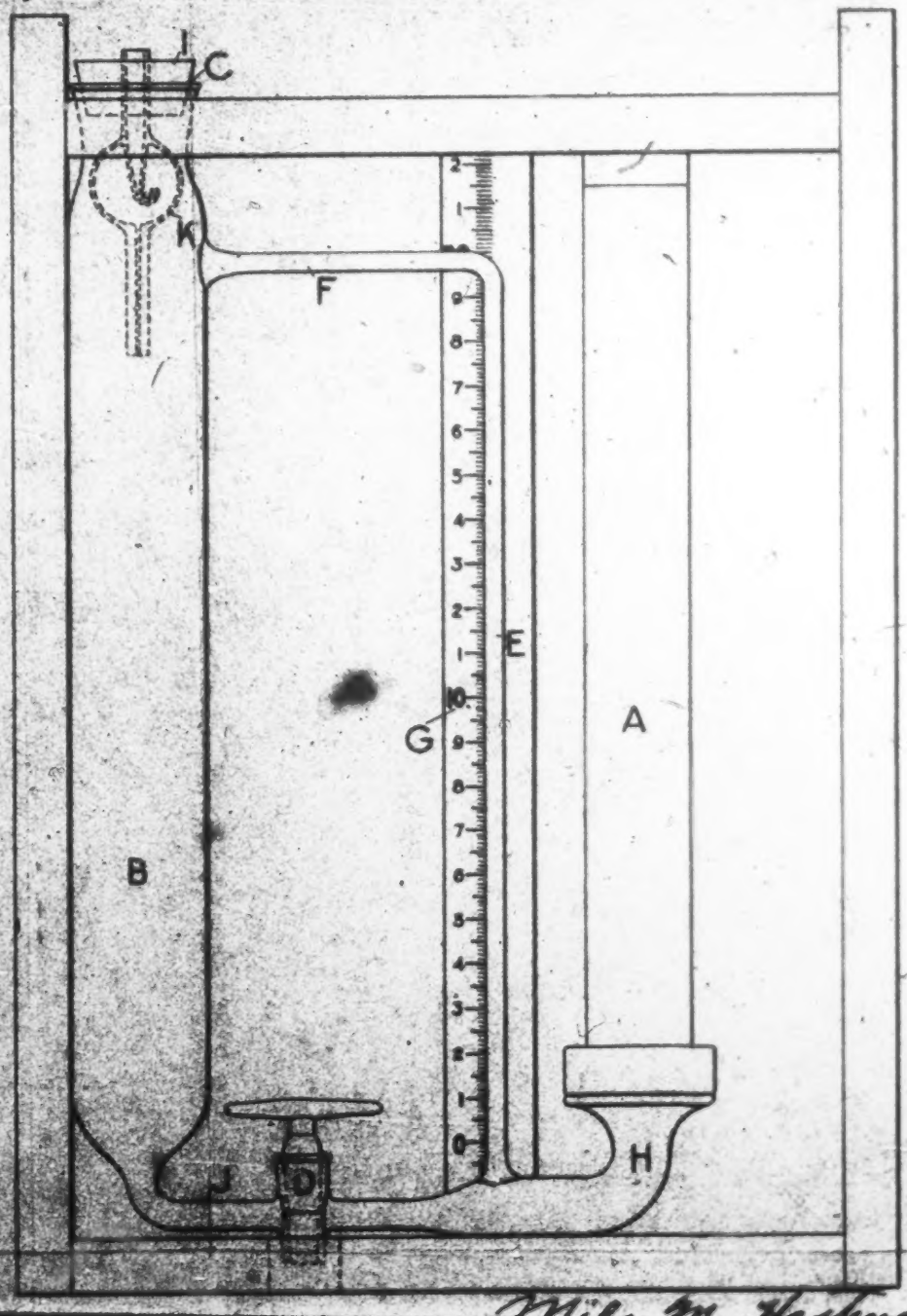
(Here follows 1 specification, side folios 357, 358, 359 and 360)

M. M. HASTINGS.

APPARATUS FOR MEASURING THE HUMIDITY IN OR DETERMINING THE EVAPORATING POWER OF THE AIR.

APPLICATION FILED SEPT. 28, 1908.

911,875. Patented Feb. 9, 1909.



Witnesses

UNITED STATES PATENT OFFICE.

MILO M. HASTINGS, OF WASHINGTON, DISTRICT OF COLUMBIA.

APPARATUS FOR MEASURING THE HUMIDITY IN OR DETERMINING THE EVAPORATING POWER OF THE AIR.

No. 911,875. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed September 28, 1908. Serial No. 455,109.

(DEDICATED TO THE PUBLIC.)

To all whom it may concern:

Be it known that I, MILO M. HASTINGS, an employee of the Department of Agriculture, and a legal resident of the State of Kansas, at present residing in the city of Washington, District of Columbia, whose post-office address is No. 1733 Twentieth street northwest, in said city and District, have invented a new and useful Apparatus for Measuring the Humidity in or Determining the Evaporating Power of the Air.

This application is made under the act of March 3, 1883, chapter 143 (22 Stat., 625), and the invention herein described and claimed may be used by the Government of the United States or any of its officers or employees in the prosecution of work for the Government or by any person in the United States, without payment to me of any royalty thereon.

This invention relates to atmospheric humidity and is adapted for use in measuring the humidity in, or determining the evaporating power of, the air.

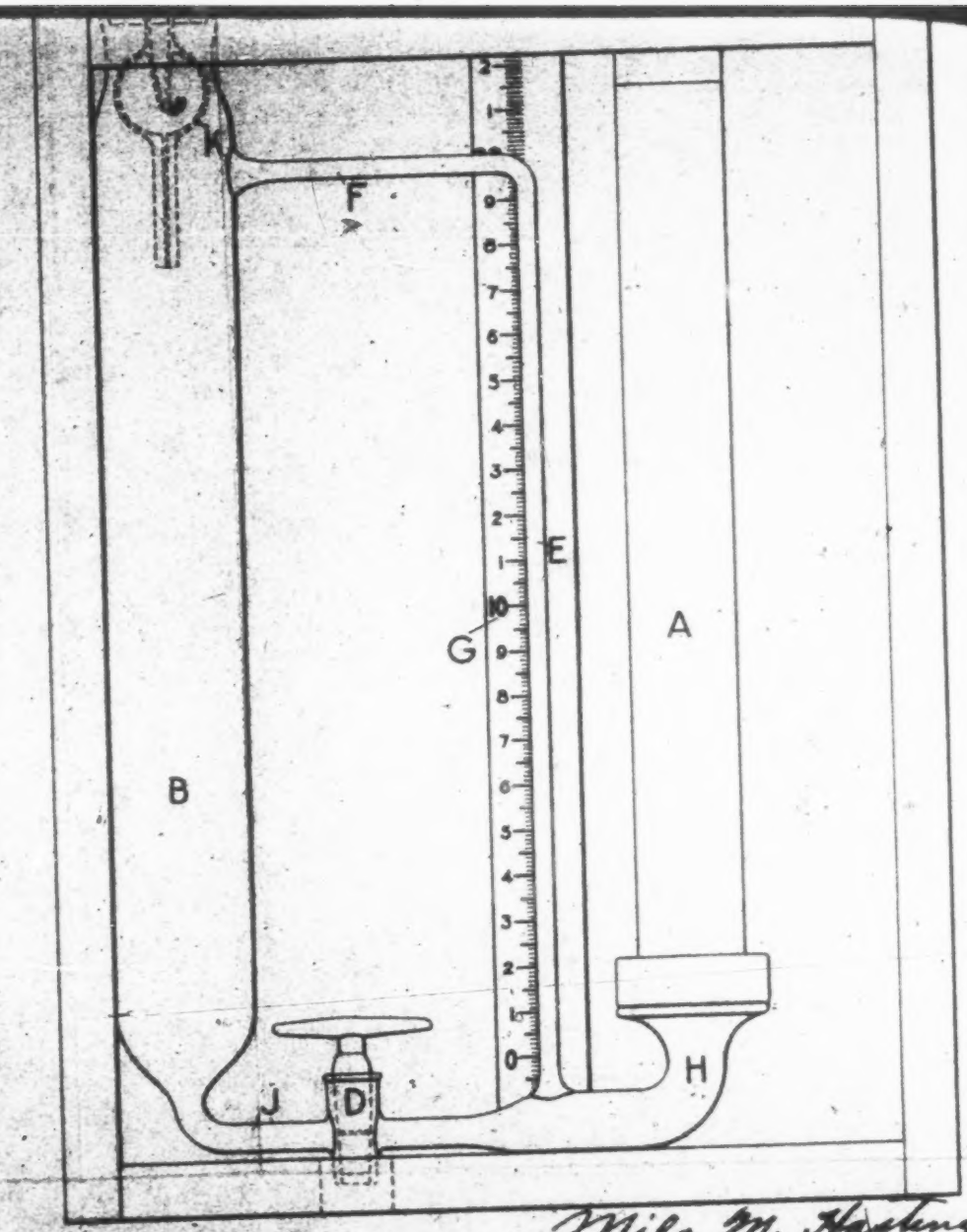
The object of the invention is to produce a humidity measuring instrument that will meet the needs of the cold storage industry.

Heretofore, no satisfactory device has been perfected for determining the humidity in the air under cold storage conditions and as a result, it frequently occurs that operators of cold storage plants sustain much loss due to wrong conditions of atmospheric moisture. When the air is too dry in cold storage rooms it is deleterious to various products, and when the air is too moist in such rooms, it is likewise injurious to certain commodities. Therefore, it is the purpose of my invention to afford a means for detecting and measuring atmospheric humidity, in order that such conditions may be properly controlled.

tom end by means of [illegible] to a [illegible] glass tube H. [illegible] nects with a [illegible] near its center [illegible] runs perpendicularly [illegible] is connected with [illegible] of similar diameter [illegible] glass tube, B, of [illegible] serves as a reservoir [illegible] used in practice [illegible] ervoir B has an [illegible] to permit the [illegible] This opening, [illegible] check bulb K fitted [illegible] and when placed [illegible] lows freedom of [illegible] mitting leakage of the liquid contained in the reservoir, B. The reservoir, or larger glass tube, B, at its [illegible] of and has opening into a smaller glass tube, J, and the tube [illegible] cock, D. The purpose of the stop-cock D is to check the flow of liquid from the glass tube J to the glass tube E, the two tubes being intersected by the stop-cock D, as shown in the accompanying drawing.

G is the scale placed behind the glass tube E and its use is to facilitate the reading of any change in the volume of liquid contained in the said tube, though the glass tube E may be graduated, so as to record any change in the [illegible]

In operating the said apparatus, I fill the reservoir B approximately three-fourths full with a desired [illegible] acid or other [illegible] the device [illegible] liquid to run into and completely fill the porcelain tube F and the glass tube H. When this action is accomplished the stop-cock D is closed [illegible]



Milo M Hastings
INVENTOR

WITNESSES
Harry Hosking
Charles O. Boyle

Per Geo. McCabe
ATTORNEY

To all whom it may concern:

Be it known that I, MILO M. HARRISON, an employee of the Department of Agriculture, and a legal resident of the State of Kansas, at present residing in the city of Washington, District of Columbia, whose post-office address is No. 1733 Twentieth street northwest, in said city and District, have invented a new and useful Apparatus for Measuring the Humidity in or Determining the Evaporating Power of the Air.

This application is made under the act of March 3, 1883, chapter 143 (22 Stat., 625), and the invention herein described and claimed may be used by the Government of the United States or any of its officers or employees in the prosecution of work for the Government or by any person in the United States, without payment to me of any royalty thereon.

This invention relates to atmospheric humidity and is adapted for use in measuring the humidity in, or determining the evaporating power of, the air.

The object of the invention is to produce a humidity measuring instrument that will meet the needs of the cold storage industry.

Heretofore, no satisfactory device has been perfected for determining the humidity in the air under cold storage conditions and as a result, it frequently occurs that operators of cold storage plants sustain much loss due to wrong conditions of atmospheric moisture. When the air is too dry in cold storage rooms it is deleterious to various products, and when the air is too moist in such rooms, it is likewise injurious to certain commodities. Therefore, it is the purpose of my invention to afford a means for detecting and observing atmospheric humidity, in order that such conditions may be properly remedied, when necessary, so as to avoid any harmful and injurious effects to the products in cold storage.

The nature, characteristics and scope of the invention will be more readily understood from the following description taken in connection with the accompanying drawing, forming a part hereof, wherein is shown a front perspective view of the apparatus.

Referring to the drawing, A represents a porous porcelain tube, having an opening at the bottom thereof, and is attached at its bot-

negative movement of the liquid in the reading tube E, thereby indicating that more moisture should be supplied the room. If the humidity of the room is greater than desired, the vapor pressure of the moisture in the air will be greater than the vapor pressure of the liquid in the instrument, and moisture will be absorbed from the air by the liquid in the porcelain tube A. This will cause a positive movement of the liquid in the reading tube E toward the reservoir or large glass tube B, thereby indicating that less moisture should be supplied to the room. If the room has the desired degree of moisture, neither evaporation nor absorption takes place, and the liquid in the tube E remains stationary.

I do not confine myself to the sole use of aqueous sulfuric acid in practicing my invention, but any other aqueous solution possessing similar properties may be used in obtaining the same desired results.

Having thus described my invention, I claim:

1. An apparatus having a porcelain tube A, glass tubes H, J, E, and F, of small circumference, and a glass tube, B, of large circumference with an opening at its top for receiving fluid and a stopper for closing said opening, the glass tubes F and E being arranged so as to connect the glass tube B with the glass tube H, thereby permitting the flow of fluid from one tube to the other, substantially as described.

2. An apparatus having a porcelain tube A, glass tubes H, J, E, and F, of small circumference, and a glass tube, B, of large circumference with an opening at its top for receiving fluid and a stopper for closing said opening, the glass tubes F and E being arranged so as to connect the glass tube, B, with the glass tube, H, thereby permitting the flow of fluid from one tube to the other, and a stop-cock to regulate such flow, substantially as specified.

3. An apparatus having a porcelain tube A, glass tubes H, J, E, and F, of small circumference, and a glass tube, B, of large circumference with an opening at its top for receiving fluid and a stopper for closing said opening, a stop-cock intersecting the glass tubes J and H, and the glass tube J being arranged so as to connect the glass tube B with the tube H, thereby permitting the flow of fluid from one tube to the other, substantially as specified.

4. An apparatus having a porcelain tube A, glass tubes H, J, E, and F, of small circumference, and a glass tube, B, of large circumference with an opening at its top for receiving fluid and a stopper for closing said opening, the tubes F and E being arranged so as to connect the tube, B, with the tube, H, thereby permitting the flow of fluid from one tube to the other, and the tubes containing fluid for determining the evaporating power of air, and a scale plate provided with graduations for indicating variations in the volume of said fluid whereby the humidity of the air may be determined, substantially as specified.

In testimony whereof I affix my signature in the presence of two subscribed witnesses.

MILO M. HASTINGS.

Witnesses:
ROB R. SLOCUM,
G. ARTHUR BELL.

[fol. 361] In United States District Court, District of Connecticut

In Equity. No. 2,369

Samuel B. Smith

v.

A. B. Hall and L. C. Hall, d. b. a. Hall Brothers

Messrs. Rockwell & Bartholow, of New Haven, Conn., and Arthur L. Ely, Esq., of Cleveland, Ohio, for Plaintiff.
Messrs. Billings & Harris, of Wallingford, Conn., and Arthur E. Paige, Esq., of Philadelphia, Pa., for Defendants.

Opinion

Hincks, D. J.:

This suit, charging infringement of plaintiff's patent, came before me upon the plaintiff's motion for a preliminary injunction which, after hearing and upon a "findings of fact" dated February 27, 1935, was granted. An interlocutory decree and order was entered upon the same date.

On June 17th the suit came on for trial upon the merits, the defendants appearing and interposing the defenses of invalidity and non-infringement. Having fully heard the parties, pursuant to Equity Rule 70½, I now state as follows my

[fol. 362] Findings of Fact

1. United States Patent No. 1,262,860, issued on April 16, 1918, to The Buckeye Incubator Company, assignee, upon the application of S. B. Smith, filed October 26, 1916. On April 29, 1927, said The Buckeye Incubator Company, being then the owner of said patent, did sell and assign the same to Samuel B. Smith, the plaintiff herein, who has ever since been the sole and exclusive owner of said patent.

2. The patent in suit is stated to be an improved apparatus and method for the incubation of eggs in large quantities. Claim 1 thereof, which alone is in issue, is as follows:

"1. The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber

having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a current of heated air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified."

3. The patent also includes article claims for an in- [fol. 363] cubator, and in the specifications the descriptions of the article and method are commingled. They disclose a large chamber wherein thousands of eggs in various stages of incubation are placed in trays in tiers and subjected to a forced circulation of air "adapted preferably to maintain all eggs at temperatures between 100° and 105° Fahrenheit approximately." The specifications contemplate that at intervals of three days fresh eggs shall be inserted at the top tier in the chamber, and that at the same interval the eggs previously set shall successively be moved downward in the tiers, so that the eggs in the latest stage of incubation shall be at the bottom levels where the actual hatching occurs and the chick emerges. Excerpts from the specifications upon which defendants rely in urging a narrow construction of Claim 1 are as follows:

"The temperature of circulating air should be such as will prevent the *eggs in the early stage of incubation from falling below* 100° and the speed or velocity of the circulating air should be such as to carry the heat away from the eggs *in the later stage* of incubation and thereby hold the temperature of those eggs at 105° or slightly below that. It is manifest that the temperature will remain practically the same throughout the column of eggs, but the air is impelled with sufficient velocity to carry the heat away from the eggs which happen to be *in the advanced stage* of incubation."

"These trays are provided with open mesh bottoms 14 upon which the smaller ends of the eggs rest in close and solid formation, and each tray of eggs occupies the upper [fol. 364] rack 9 for the first three days, and is then transferred to a place in the upper end of the tilting rack 10

During the next fifteen days the trays in the tilting rack are shifted from higher to lower planes therein and tilted at frequent intervals to stand in oppositely-inclined positions. The tilting of the eggs is preferably arranged to put the eggs substantially on their sides. When the eggs *in the lower-most trays* in the tilting racks 10 are about ready to hatch each tray is transferred to the stationary rack 12 where the chicks may be removed as occasion requires."

"As explained later the *trays near the bottom* are preferably arranged so that the air is forced to pass between the eggs in each tray thereby cooling or holding the temperature of those eggs down."

"And it will be also noted that the vertical spaces 27 between the adjacent tilting racks 10 are closed *at their lower ends* by flexible strips of fabric which are attached to and extend upward at each side of each rack so as to compel the air to circulate through the mesh bottom and around and about each egg as heretofore referred to, and as *the eggs further advanced in incubation are contained in these lower trays* and as the danger is that the temperature will rise in these eggs to a point injurious to incubation the improved method disclosed herein permits the circulating air to act as a medium to prevent the over-heating at this stage of incubation and this is accomplished by promoting [fol. 365] an induced draft *within the lower trays*. It is obvious that the fans can be so arranged and can be operated at such speed as to cause the hot air to circulate fast enough to keep the temperature throughout the chamber between the limits of 100° and 105°."

"It, therefore, appears that the improved apparatus and method contemplates the application of hot air circulating in a column with such speed as to keep the temperature substantially uniform and so arranging the eggs that the fresh eggs are placed at one point in the column of air and held in a horizontal plane until they reach a predetermined stage of incubation and then put at a different point in the same column of air and kept in planes inclined to the horizontal and thereafter placed at such a point in the column of air that the forced draft of air acts to hold the eggs at a uniform temperature, and to prevent them from becoming over-heated and thereafter placing the eggs into final positions for the hatching operation."

4. Up to the time the plaintiff's patent issued and thereafter substantially until 1923, it was generally believed that an air temperature of 100° F. within the incubator would maintain the eggs in the early stages of incubation at a temperature of 100° F., and the smaller, or "Buckeye," incubators first put out under the patent in suit in 1917 were generally operated at that temperature. After the patent issued, however, it was found that the temperature of eggs in the early stage of incubation was lower than theretofore [fol. 366] believed. From evidence that an air temperature of 100¾° F. would maintain such eggs at a temperature of 100° F., I conclude that the early "Buckeye" incubators, operated at an air temperature of 100° F., must have maintained the early eggs at a temperature between 99° and 100°.

However, the Buckeye incubators with their comparatively low humidity, would have operated successfully at a slightly higher temperature, raising the eggs in the early stage of incubation to a temperature of 100° F., thus bringing them within the range stated in the patent specifications. For the larger, or "Smith," incubators, first put out under the patent in suit in 1923, the plaintiff recommended an operating air temperature of 99° F., and in 1928 the plaintiff found further efficiency resulted from operation at a substantially higher humidity provided the air temperature was carefully controlled so as not to exceed 99° F.

5. The plaintiff and his predecessor in title have put to commercial use with very substantial success the method of Claim 1 of the patent in suit continuously since 1917.

6. The defendants contend that the plaintiff, notwithstanding the issue of the patent in suit, was not the original and first inventor of the discovery disclosed in said patent, but that the same had been previously known by one Hastings and used by him on a farm in Brooklyn, N. Y., operated by one Walter R. Davis. As to this use, the gist of the evidence offered follows and is further amplified in my comments below.

[fol. 367] The witness Hastings testified in substance as follows: That in the early months of 1911 he was employed by Walter R. Davis to build and operate an incubator on Mr. Davis' poultry farm in Brooklyn, N. Y.; that he then upon constructed an incubator in the cellar of Mr. Da[illegible]

farm house wherein several Cyphers incubators were already installed and in operation. The method of hatching used in this incubator was to insert the eggs in superimposed layers in a plurality of trays, one above the other, in a chamber wherein the air was circulated by a fan, the temperature being under thermostatic control. A gas heater outside the chamber was available to heat the air therein and cracks around the door admitted a certain amount of fresh air. This method of incubation was used under Hastings' supervision continuously beginning in March, 1911, for two months, a fresh lot of eggs being inserted twice a week during that period. Within this period a test was made to compare the Hastings incubator with the Cyphers machine. On the eggs used it was found that the Hastings incubator had about the same comparative efficiency as the Cyphers machine, each type hatching 59% of the eggs used, at least according to the best recollection of the witness. The Hastings incubator, as constructed for Mr. Davis, had a capacity of 6,000 eggs. However, during the period covered by Hastings' testimony, not over 2,000 eggs were contained therein at any one time. Although the incubator was wholly Hastings' invention, his arrangement with his employer, Mr. Davis, was such that Mr. Davis owned the machine and was licensed to operate the same even after Hastings left his employ in the latter part of May, 1911. Mr. Davis, by [fol. 368] public advertisement copyrighted and published in 1911, invited the public to visit his farm. However, the general public was not admitted to inspect the Hastings incubator, at least while Hastings was in Davis' employ, because Hastings wished it kept secret on account of a pending application for a patent which he filed while in Davis' employ. But, although the general public was excluded from an inspection of the Hastings incubator, Hastings' friends and Mr. Davis' were allowed to see the same.

Mr. Walter B. Davis testified as follows: That he employed Hastings upon the recommendation of the editor of the "Poultry Digest," who represented that Hastings could build an incubator which would supplant the Cyphers [illegible]. The Hastings incubator was made of wood and cork [illegible] contained a thermostatic control for artificial heat [illegible] was furnished by a gas burner outside the chamber. [illegible] circulated air so that the temperature as registered

on thermometers on the top, bottom and center of the chamber was uniform. While Hastings was there and thereafter the incubator was operated at a temperature of 102½° F. Eggs in trays, one above the other, were inserted at semi-weekly intervals of unequal amounts. He continued to use the incubator after Hastings left and had it in his cellar until December, 1913, when, because of business reverses, he gave up the farm and destroyed the Hastings incubator because it was not portable. A great many of his guests saw the incubator when in operation.

Mrs. Davis, the wife of Walter B. Davis, also testified that she saw the Hastings incubator in operation in the farm [fol. 369] house cellar. She recalled that the incubator was used after Hastings left under the management of one Miller. The remainder of her testimony appeared to be largely hearsay.

7. On trial the defendant offered in evidence the patent application of Milo Hastings dated April 15, 1911, Serial No. 624,885, filed May 3, 1911, together with the file wrapper pertaining to the same, showing that the application was rejected by decision upon a Patent Office appeal thereon dated March 11, 1913. On trial it was conceded that said patent application was thereupon abandoned and on that account plaintiff objected to its admission in evidence as being wholly immaterial to all issues of the case. At the trial ruling was reserved. And now, upon authority of U. S. Blind Stitch Corp. v. Reliable Machine Works, Inc., 65 Fed. (2nd) 327, and The Corn Planter Patent, 23 Wall. 181, at page 211, the objection is overruled and, subject to plaintiff's exception, the abandoned application with the accompanying file wrapper is received in evidence as Exhibit "F," not, however, as showing in itself an anticipation of the patent in suit, but only in so far as it tends to corroborate other evidence that the discovery disclosed in the patent in suit was previously known and used by Hastings, and that Smith was not the original and first inventor thereof.

8. Upon all the evidence I find that the defendants have failed to establish by clear and convincing proof, still less beyond a reasonable doubt, that Hastings in fact knew and used on the Davis farm in 1911 the method of incubation disclosed in Claim 1 of the patent in suit, or that the method [fol. 370] which Hastings then used was successful, or that

said use was anything more than a casual or forgotten use, or that said use made any contribution to the art.

With respect to the conclusions of fact just stated, it will be observed at the outset that the only documentary evidence to corroborate Hastings' so-called prior use is his abandoned and rejected patent application and its file wrapper. The application, made while in Davis' employ during the progress of the so-called prior use, contains not even a suggestion of the presence of staged incubation. And the earliest mention of staged incubation contained in the file wrapper is in a written argument of counsel dated May 24, 1912,—substantially a year after Hastings' employment by Davis had terminated. Thus, at most, the only documentary evidence supporting a prior use of the method of staged incubation was substantially subsequent to the date of its alleged reduction to practice. That Hastings in 1912 knew of staged incubation is slight evidence, if any, that he practiced it in 1911.

Davis and his wife, to be sure, testified that Hastings practiced staged incubation, but Davis had a busy linotype establishment running in New York day and night; his wife was his bookkeeper. The record does not show that either of them actually saw the eggs set in staged incubation. Their belief in the presence of staged incubation obviously is attributable to the fact that they received bills for frequent shipments of setting eggs. They now say they supposed these eggs were set in the Hastings incubator twice a week, as received. But so far as their actual knowledge is concerned, it well may have been that the eggs received for [fol. 371] setting were distributed between the Hastings incubator and the several Cyphers incubators, in use near by, wholly without staged incubation. Thus, on analysis, the practice of staged incubation in connection with this alleged prior use rests upon the verbal testimony of Hastings alone.

Moreover, the dearth of evidence is not without significance. It is said that the process was practiced under the supervision of one Miller after Hastings had left Davis' employ. But Miller was not produced as a witness, nor his absence accounted for. The evidence is that Orvis, who brought Hastings and Davis together, also knew of the claimed use. Orvis likewise was neither present nor accounted for. Davis testified that under his orders, Hastings' incubator was destroyed by his nephew. But his

nephew was neither present nor accounted for. Davis testified that "this incubator and the method of operation" were seen by his guests, "many hundreds—probably a couple of thousand." But of these thousands, not one was brought to testify. Moreover, Davis throughout was by occupation a printer and linotypist in New York, who ran this farm in Brooklyn as a side line. (I infer that on the farm he must have maintained some kind of a public establishment, from his testimony that he had four dining rooms, and sometimes had to slaughter 200 broilers for the guests on a single Sunday.) He says that in December, 1913, he surrendered the lease of the farm because of unfortunate investments in aviation, and had to destroy the Hastings incubator because it was non-portable. Obviously, the testimony of such a layman with respect to the technicalities [fol. 372] of hatching is of less weight than that of a professional poultry-man. Even so, it would have been natural even for a layman engaging in the poultry business as a side line on such a scale to have kept records relating to his hatchings. But such records were neither offered nor accounted for, nor was any documentary evidence offered to corroborate the unusual circumstances explaining the utter destruction of what the defendants offer as the only prior use of Smith's invention.

As for Hastings' testimony, it appeared to me candid. Nevertheless, he admitted that he subsequently, in the course of promotion of a subsequent enterprise, represented that the Davis incubator had a 15,000 capacity instead of 6,000 which was the fact. He admitted freely that, believing himself "to be the original inventor of a basic principle which another man later develops and attempts to monopolize", he naturally felt "some element of resentment that he did not share in such return." Moreover, in the file wrapper of his abandoned application it was stated by his attorney in a writing dated May 24, 1912, that Hastings had made "a painstaking and very costly series of experiments" whereby he had discovered that a "forced circulation must be such as to overcome the counteracting influence of the eggs upon the air when said eggs are in *the different stages of incubation.*" But in his cross-examination he admitted that in a previous case he had testified that he did not remember "the details of the time we set these eggs because it was of no importance to the pro-

ciple of incubation, but merely a matter of convenience in handling the eggs and taking off the chicks." And again, [fol. 373] that in the summer of 1918, when in Ohio, while employed by one Hoppel, he "tried out a method of hatching there very much more like the Smith-Buckeye device than I had used in the past."

But even if staged incubation was in fact used at this time and place, it does not follow that the entire method of claim 1 was then successfully reduced to practice. Hastings' testimony, upon which the defendants rely to prove a successful reduction to practice, is as follows:

"I mean we made a comparative test of dividing lots of eggs and putting some in Cyphers' machine and some in the machine I built. My memory is that the machines hatched about equally well and that the hatch was about 59%. I wouldn't be sure of it exactly."

If this was one of his "costly" experiments referred to in his file wrapper, it is strange that no documentary record has come down to us of this or any other test. But passing that point, the record is wholly silent as to the conditions of the test. For aught that appears the test may have been made as soon as the Hastings incubator was completed and before staged incubation began, if indeed it ever was practiced. At the time of the test, the eggs in the Hastings incubator may have been all of one stage or of a number no greater than those used in the Cyphers incubator, and the "test" may have been no more than an application of the old convection method of artificial incubation. For the Hastings incubator, he says, had a capacity of 6,000 but was [fol. 374] never operated with over 2,000. For all I know 2,000 eggs set in a chamber three times too large for them and supplied with some heat and some natural ventilation, even without a fan, might have produced as good a hatch as Hastings got. And if Hastings, as the drawing of his abandoned patent application discloses, had his fan outside a fabric enclosure of the egg chamber, perhaps the only mechanical circulation of air was around the outside of the fabric enclosure; inside the fabric it well may be that the only circulation of air was the product of convection as in the old-style incubators, so that the incubation was proceeding under the old process rather than the new.

I am thus left in doubt as to whether Hastings on the Davis farm in the spring of 1911 did what it is said he did; if so, whether he used the method of Claim 1 of the patent in suit; and if so, whether his use thereof was a successful use within the rule of Corona Cord Tire Co. v. Dovan, 276 U. S. 358.

9. The complaint herein was filed on July 18, 1934. Within the period of six years prior thereto, the defendants, who for twenty-five years have been engaged in the operation of a commercial hatchery, purchased and used a number of Robbins 23 incubators, and also three Robbins 17 incubators. These incubators were the same as those which were held to be an infringement of Claim 1 of this same patent in the case of Smith v. Waxham, 294 U. S. 20. In these machines, the hatching, that is to say, the actual pipping of the shell, takes place in the same chamber in which the entire incubation is accomplished. The [fol. 375] defendants also during this period purchased and used two Robbins No. 62 multi-hatchers each consisting of two No. 10 "hatchers", a "hatcher" comprising a separate compartment designed to contain the eggs for the last two or three days of incubation only. Thereafter the defendants used the Robbins 23 machines for the first eighteen or nineteen days of incubation, whereupon the eggs were transferred to the No. 10 hatchers in which the incubation was completed and the chicks emerged. In 1933 the defendants further purchased four Robbins Model 62 incubators, each containing two incubating cabinets of 26,000 egg capacity, and one No. 10 hatcher. In 1934 they purchased a Robbins Model 125, comprising two of the model 62 incubators just above described. The method of incubating in all these Robbins machines was precisely the same as that used in Robbins models 17 and 23, except that in the other models the eggs were removed from the incubating chamber the eighteenth or nineteenth day to a separate hatcher wherein the incubation was completed and the chicks emerged. In the operation of this apparatus the defendants maintained an air temperature in the incubators at 99° F., and a humidity of 35% to 45%; in the separate hatchers an air temperature of 98° F., and a humidity of 65% to 80%. Since the fall of 1930 the defendants have wholly used separate hatchers for the eggs for the last three days of incubation. The device of a separate

hatcher, permitting of different temperature and humidity for the last three days of incubation, according to the defendants' testimony, increased the percentage of their hatches from 2% to 5%, enabling them to attain an ef- [fol. 376] ficiency of 85% to 90%.

10. The method used by the defendants in the use of all of the Robbins machines above specified involved the arrangement of the eggs at different levels in staged incubation in a closed chamber, having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture; the application to the eggs of heated air in a current created by means other than variation of temperature; the current of air being of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air is vitalized, moisture conserved, and the units of heating carried from the eggs in the more advanced stage to those in the less advanced.

Conclusions of Law

I

Claim 1 is valid notwithstanding the defendants' contention that its subject-matter was previously known and used by others in this country within the meaning of R. S. 4886.

The only prior use which the defendants sought to prove was the so-called Hastings use on the Davis farm. This is subject-matter which, I am told, was not before the Supreme Court when it held the patent valid and infringed. Smith v. Snow, 294 U. S. 1; Waxham v. Smith, id. 20. The evidence set forth above is insufficient to establish this use with the certainty required by the well-established rule. Barbed Wire Patent Case, 143 U. S. 275; Deering v. Win- [fol. 377] ona, 155 U. S. 286; General Motors Corp. v. Leer Auto Supply Co., 60 Fed. (2nd) 904. The mere fact that the witnesses on the stand have an appearance of candor is not sufficient. To be sure, in the case of Corona Co. v. Dovan Corp., supra, it was said (although the decision did not rest upon the dictum) that a prior use might be established by a single witness, "in connection with other circumstances". But it was there pointed out that if the prior use were "an isolated instance", unconnected with a consistent history of endeavor, it "might reasonably give

rise" to a question. And in U. S. Blind Stitch Corp. v. Reliable Machine Works, supra, although the rule was held to be satisfied, the report shows neither the quality nor volume of evidence there adduced to satisfy the rule.

Moreover, on the record submitted in this case, if the method of Claim 1 was in fact used at all, for aught that appears it was promptly forgotten, only to be recalled in connection with the litigation that followed the Smith patent. Such a use, contributing nothing to the store of human knowledge, does not negative novelty. Gaylor v. Wilder, 10 Howard, 477; Diamond Patent Co. v. S. E. Carr Co., 217 Fed. 400. Nor do the defendants negative novelty by proof of "only a casual use, abandoned thereafter and never entering into the art until after the patent in suit was applied for",—in this case an interval of over five years. Concrete Mixing Co. v. Powers-Kennedy Contracting Corp., 27 Fed. (2nd) 688.

II

Claim 1 is valid notwithstanding the defendants' contention that its subject-matter was "in public use and on sale [fol. 378] in this country for more than two years prior" to the plaintiff's application for the patent in suit within the meaning of R. S. 4886.

For if the subject-matter, as I have held, was not known and used by others in this country before the plaintiff's discovery, a fortiori, it was not in public use and on sale for more than two years prior to the application for the patent in suit.

III

Claim 1 is valid notwithstanding the defendants' contention that it "does not disclose a successful method of operation."

Defendants' contention in this respect is based upon the fact, conceded by the plaintiff, that, especially in incubators of the larger dimensions, more successful operation can be obtained by maintaining the eggs in the endothermic stage at a temperature somewhat below 100° F. than at the higher temperatures stated in the specifications. But the claim in question, being entitled to a liberal construction, Smith v. Snow, supra, cannot be restricted by so treating the descriptive phrases of the specifications as downright limi-

tions. Moreover, the evidence shows that not only were the plaintiff's earlier and smaller incubators operable even within the temperature ranges of the specifications; they were commercially successful. And the defendants' own evidence, upon which they rely as showing a prior use by Hastings, is to the effect that Hastings operated successfully at a temperature of 102½° F.

[fol. 379] IV

In connection with their use of Robbins Models 17 and 23, the defendants infringed Claim 1 of the patent in suit.

If claim 1 be valid, it was conceded on brief that these models infringed. Indeed, Waxham v. Smith, supra, has put that conclusion beyond dispute.

V

The defendants' use of the Robbins models other than Nos. 17 and 23 likewise constituted an infringement of Claim 1.

The force of this conclusion the defendants seek to avoid by the contention that the final clause of Claim 1, in which it is said: "The units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage", when construed in the light of the specifications, contemplates that the eggs shall be completely incubated in the chamber where the process began, because the words "more advanced stage of incubation" are used in a superlative sense to mean "the most advanced stage."

I am unable to adopt such a stilted construction which would so narrow the disclosure of the claim as to deprive it of all value. In Smith v. Snow, supra, it was said of this very patent and claim: "The character of the patent and its commercial and practical success are such as to entitle the inventor to broad claims and to a liberal construction of those which he has made." Since the Hastings' so-called [fol. 380] prior use has not been satisfactorily proven, there is nothing else in the record here which could possibly justify me in giving the claim in suit a narrower construction than that which the Supreme Court has already accorded to it. And so, construing this element of the claim as requiring only the presence of an air-relation between eggs in the less advanced (endothermic) stage and those in the

more advanced (exothermic) stage, it follows that infringement is not avoided by removing the eggs for the final three days of incubation into a separate hatching chamber. As was said in Waxham v. Smith, supra, "Petitioner does not avoid infringement of respondent's method of patent merely by employing it in a machine of different construction than respondent's, whether more or less efficient." The fact remains that the defendants in their use of the Robbins apparatus have utilized all the essential elements disclosed in Claim 1.

The plaintiff may have a decree, with costs, adjudging Claim 1 of the patent in suit to be valid and infringed, and a reference for an accounting of all profits enjoyed by the defendants and an ascertainment of all damages sustained by the plaintiff by reason of the defendants' infringements occurring between July 18, 1928 and April 16, 1935, on which date the patent in suit expired.

New Haven, July 18, 1935.

[fol. 381] In United States District Court

[Title omitted]

Plaintiff's Exception

Now comes the plaintiff herein, by his attorneys, and files herein his exceptions to the ruling of this Court contained in paragraph 7 of the Findings of Fact filed herein, admitting the Hasting's Abandoned Application File (Exhibit F) in evidence for the purposes set forth in said paragraph or for any purpose.

Rockwell & Bartholow.

New Haven, Connecticut.

[fol. 382] In United States District Court for the District of Connecticut

In Equity. No. 2369

Samuel B. Smith, Plaintiff,

vs.

A. B. Hall and L. C. Hall, d. b. a. Hall Brothers, Defendants

Interlocutory Decree

This cause having come on for hearing and having been heard in open Court upon the testimony and upon briefs filed by the parties, and the Court having filed herein its Findings of Fact and Conclusions of Law, it is hereby

Ordered, Adjudged and Decreed:

1. That the plaintiff, Samuel B. Smith, is the sole and exclusive owner of Smith Patent No. 1,262,860, dated April 16, 1918, and entitled to all recovery for infringement thereof.

2. That Claim 1 of the patent is valid.

3. That the defendants, A. B. Hall and L. C. Hall, doing business as Hall Brothers, at Wallingford, Connecticut, have infringed upon Claim 1 of the patent by the operation of incubators known as Robbins No. 23, Robbins No. 17, Robbins No. 62 and Robbins No. 125.

4. That the preliminary injunction previously issued in this cause was not improvidently granted, and that the supersedeas bond of Twenty-five Thousand Dollars ($25,-[fol. 383] 000.00) filed by defendants shall remain in full force and effect until the termination of any accounting herein in accordance with its terms.

5. That the plaintiff is entitled to an accounting from the defendants of all profits enjoyed by the defendants and all damages sustained by the plaintiff by reason of the defendants' infringements occurring between July 18, 1928, and April 16, 1935, and that this cause be referred to ——— as Special Master of this Court, who is hereby appointed to ascertain and report to this Court a true and

correct account of the extent of the infringement and also the amount of the gains, profits and advantages which the defendants have received from the infringement of Claim 1 and the amount of damages which the plaintiff has sustained by reason thereof, with the usual powers to compel attendance and the producing of papers, books and records of defendants' operations, at such times and places as he shall from time to time direct.

6. That the plaintiff recover his costs in this behalf sustained and have execution therefor.

Dated at New Haven, Connecticut, this 12th day of August, 1935.

(Sgd.) Carroll C. Hincks, U. S. D. J.

Approved as to form: Rockwell & Bartholow, Attorneys for Plaintiff. —— ——, Attorneys for Defendants.

[fol. 384] In United States District Court

[Title omitted]

Petition for Appeal

To the Honorable Judges of Said District Court:

The above named Defendants feeling themselves aggrieved by the decree made and entered in this cause on the Twelfth day of August, 1935, hereby appeal from said decree to the United States Circuit Court of Appeals for the Second Circuit, for the reasons specified in the Assignment of Errors which is filed herewith, and pray that said appeal be allowed and that citation be issued as provided by law, and that a transcript of the record, proceedings and papers upon which said decree was based, duly authenticated, may be sent to the United States Circuit Court of Appeals for the Second Circuit, sitting at New York, N. Y.

And desiring to supersede the execution of the decree, petitioners here tender bond in such amount as the Court may require for such purpose, and pray that with the allow-
[fol. 385] ance of the appeal a supersedeas be issued.

And your petitioners further pray that the proper order be made regarding the security required of them to perfect their appeal.

Arthur E. Paige, Frank E. Paige, Attorneys for Defendants. Robert P. Billings, Solicitor for Defendants.

IN UNITED STATES DISTRICT COURT

[Title omitted]

ORDER ALLOWING APPEAL

And now, to wit, this 14th day of August, A. D. 1935, upon consideration of the annexed Petition for Appeal in the above cause, it is, upon motion of Robert P. Billings, Solicitor for petitioners,

[fol. 386] Ordered by the Court that the appeal of said Defendants prayed for therein be and is hereby allowed and shall operate as a supersedeas upon the petitioners filing a bond in the sum of Two Hundred Fifty Dollars, with sufficient securities to be conditioned as required by law.

Carroll Hincks, U. S. D. J.

IN UNITED STATES DISTRICT COURT

[Title omitted]

ASSIGNMENT OF ERRORS

Now come the Defendants and present with the accompanying Petition for Appeal from the Decree entered in the above entitled cause on August 12, 1935, the following assignment of errors:

1. The Court erred in its Findings of Fact 4 that Buckeye incubators were operated *"under the patent in suit in* [fol. 387] 1917" "at an *air* temperature of 100° F." The patent in suit was not in fact issued until April 16, 1918, and specifies that "The temperature of circulating air

should be such as will prevent the *eggs* in the early stage of incubation from falling below 100°." The evidence of record, testimony of Plaintiff's witness Taggart, (Rec. p. 56), is that an air temperature of 100½ to 100¾° F. would be necessary to fulfill that condition of operation.

2. The Court erred in holding in its Findings of Fact 4 that the Buckeye incubators "would have operated successfully at a slightly higher temperature, raising the eggs in the early stage of incubation to a temperature of 100° F." The testimony of Plaintiff's witness Taggert (Rec. p. 58) is that an air temperature of even 99¼° F. was too hot and destructive of life in the eggs.

3. The Court erred in its Findings of Fact 4 in finding as relevant to the questions at issue the assumption that the Buckeye incubators would have operated successfully at a higher air temperature "raising the eggs in the early stage of incubation to a temperature of 100° F., thus bringing them within the range stated in the patent specifications." That finding is inconsistent with the testimony of Plaintiff's witness Taggert.

4. The Court erred in holding in its Findings of Fact 5 that the "plaintiff and his predecessor in title have put to commercial use with very substantial success the method of Claim 1 of the patent in suit continuously since 1917." [fol. 388] The testimony of Plaintiff's witness Taggert (Rec. p. 57) is that the method of the patent in suit was never in fact effected but the method which was a commercial success was essentially different from the method specified in the patent in suit.

5. The court erred in its Findings of Fact 6 in the finding that the testimony of Defendants' witness Mrs. Davis concerning the Hastings incubator in operation at the farm of her husband, Walter B. Davis, "appeared to be largely hearsay". In answer to a question of the Court, Mrs. Davis stated, on Rec. p. 113, that she was testifying from what she personally observed. She not only supervised the buying of eggs for the Hastings incubator and paid the bills for the same but "went down every week to check up" and saw that some of the "tiers" in the incubator had eggs in them and some had chicks which unquestionably indicated staged incubation.

6. The Court erred in its Fnndings of Fact 8 in the finding that "the defendants have failed to establish by clear and convincing proof, still less beyond a reasonable doubt, that Hastings in fact knew and used on the Davis farm in 1911 the method of incubation disclosed in Claim 1 of the patent in suit, or that the method which Hastings then used was successful, or that said use was anything more than a casual or forgotten use, or that said use made any contribution to the art." The testimony of Defendants' witnesses, Milo M. Hastings, Walter B. Davis, and Isabel E. Davis agrees in that every feature of the method of incubation disclosed in claim 1 of the patent in suit was known [fol. 389] and used on the Davis farm in 1911, was successful in the repeated hatching of chicks, and was certainly neither casual nor forgotten.

7. The Court erred in its F-ndings of Fact 8 in its finding, with reference to the testimony of Mr. and Mrs. Davis. "Their belief in the presence of staged incubation obviously is attributable to the fact that they received bills for frequent shipments of setting eggs." They each testified that eggs were set in the Hastings incubator on Mr. Davis' farm in 1911 at intervals of at least twice a week. See Rec. pp. 103 and 113, and Mrs. Davis testified that in her inspection of said incubator she saw eggs in different stages of incubation; some trays having hatched chicks in them and other trays having unhatched eggs in them. See Rec. p. 113.

8. The Court erred in its Findings of Fact 8 that there was a significient "dearth of evidence" with reference to the method of hatching practised on the Davis farm in 1911 because neither Francis W. Orvis, editor of the "Poultry Digest" who brought Hastings and Davis together, nor Walter B. Davis' employe Miller, who operated the Hastings incubator after Mr. Hastings left Mr. Davis' employ, was produced as a witness. Both Orvis and Miller are dead.

9. The Court erred in its Findings of Fact 8 in finding that there was a significant "dearth of evidence" regarding the method of use of the Hastings incubator on the Davis farm in 1911 because none of the "probably a couple [fol. 390] of thousand" of Davis' guests who saw the incubator in operation was produced as a witness. Twenty-

four years had elapsed between the time the Hastings incubator and the method of its operation were seen by the transient guests of Davis and the time when this case was tried.

10. The Court erred in its Findings of Fact 8 in finding that there was a significant "dearth of evidence" in that no records were offered relating to the hatchings on the Davis farm. The testimony of Hastings and Mr. and Mrs. Davis is that the incubator was used for hatching chickens which were killed and eaten on said farm, and that evidence is confirmed by the contemporary documentary evidence of Defendants' Exhibit G, which is a book entitled "Davis Poultry Farm", referred to in the second paragraph of the Court's Findings of Fact 6 in the statement "Mr. Davis by public advertisement copyrighted and published in 1911, invited the public to visit his farm".

11. The Court erred in its Findings of Fact 8 in assuming that the Hastings incubator operated on the Davis farm had his fan outside a fabric enclosure of the egg chamber". Hastings' original application, Defendants' Exhibit F, specifies that he originally proposed to insure distribution of the air currents with respect to the egg chamber by perforated walls of fabric or other material. Hastings testified, as appears in the Cooley Record, Defendants' Exhibit F, as offered by Plaintiff's Counsel on Rec. p. 90, that he first installed such perforated walls in the incubator on [fol. 391] Davis' farm but immediately removed them when he found they impeded the circulation of air to an undesirable degree and that, thereafter, said incubator was operated without any such inclosure of the egg chamber.

12. The Court erred in its Findings of Fact 8 in finding that it was doubtful if the use of the Hastings incubator on the Davis farm in the Spring of 1911 was a successful use. It was repeatedly successful in accomplishing its purpose, to wit, the hatching of chicks and thus within the rule of Corona Cord Tire Co. v. Dovan, 276 U. S. 358.

13. The Court erred in its Findings of Fact 10 as to the "method used by the defendants in the use of all of the Robbins machines" specified in Findings of Fact 9.

14. The Court erred in its Conclusion of Law I in concluding that "Claim 1 is valid notwithstanding the defendants' contention that its subject-matter was previous

known and used by others in this country within the meaning of R. S. 4886.

15. The Court erred in its Conclusions of Law II in concluding that claim 1 is valid notwithstanding the defendants' contention that its subject-matter was "in public use and on sale in this country for more than two years prior" to the plaintiff's application for the patent in suit within the meaning of R. S. 4886.

16. The Court erred in its Conclusions of Law III in the conclusion that "Claim 1 is valid notwithstanding the de-
[fol. 392] fendants' contention that it 'does not disclose a successful method of operation' ".

17. The Court erred in its Conclusions of Law V in concluding that "The defendants' use of the Robbins models other than Nos. 17 and 23 likewise constituted an infringement of Claim 1".

18. The Court erred in its Conclusions of Law V in concluding "The fact remains that the defendants in their use of the Robbins apparatus have utilized all the essential elements disclosed in Claim 1". Claim 1 is for a method of hatching, an essential element of which is that the chicks shall emerge from the shells under the conditions specified in said claim. Those conditions are not found in Defendants' use of the Robbins models other than 17 and 23.

19. The Court erred in holding that the Defendants "have infringed upon Claim 1 of the patent by the operation of incubators known as Robbins No. 23, Robbins No. 17, Robbins No. 62 and Robbins No. 125".

20. The Court erred in holding "That the preliminary injunction previously issued in this cause was not improvidently granted".

21. The Court erred in requiring Defendants to account for "gains" and "advantages which the defendants have received from the infringement of Claim 1" in addition to the profits and damages, in disregard of R. S. 4921
[fol. 393] which limits Plaintiff's recovery and Defendant's accounting to profits and damages.

22. The Court erred in not holding claim 1 of the patent in suit invalid and void for lack of sufficient disclosure in the specification to enable anyone skilled in the art to practice the method of claim 1 without experimentation.

23. The Court erred in not holding claim 1 of the patent in suit invalid and void because the specification upon which it is predicated directs such operation of the incubator elements contemplated in said claim as would prevent hatching of eggs by destroying the life in the eggs before the eggs hatched.

24. The Court erred in not holding that the method of hatching which has been used by the Defendants since the Fall of 1930 is not within the scope of claim 1 in suit as interpreted by the Supreme Court of the United States in the opinions filed by Mr. Justice Stone in the Snow and Waxham cases.

25. The Court erred in not holding that claim 1 in suit is invalid and void because the subject-matter thereof was "known * * * by others in this country" within the meaning of R. S. 4886, before the Plaintiff Smith's invention or discovery thereof alleged by him to have been in the "Spring of 1914".

26. The Court erred in not holding that claim 1 in suit is invalid and void because the subject-matter thereof was [fol. 394] "used by others in this country" before the Plaintiff Smith's invention or discovery thereof, within the meaning of R. S. 4886.

27. The Court erred in not holding that claim 1 in suit is invalid and void because the subject-matter thereof was "in public use * * * in this country for more than two years prior" to the Plaintiff Smith's application for the patent in suit, within the meaning of R. S. 4886.

28. The Court erred in not holding that Claim 1 in suit is invalid and void because the subject-matter thereof was "on sale in this country for more than two years prior" to the Plaintiff Smith's application for the patent in suit, within the meaning of R. S. 4886. The testimony of Defendants' witnesses Milo M. Hastings, Walter B. Davis, and Isabel E. Davis agrees that the right to use the method of hatching in question was acquired from Hastings by Davis by the latter's payments to Hastings in the Spring of 1911, whereas the application for the patent in suit was not filed until October 26, 1916.

A. B. Hall and L. C. Hall, Doing Business as Hall Brothers, by Arthur E. Paige, Frank E. Paige, Their Attorneys.

[fol. 395] Citation, in usual form, omitted in printing.

[fol. 396] IN UNITED STATES DISTRICT COURT

[Title omitted]

PRÆCIPE FOR TRANSCRIPT OF RECORD

To the Clerk of the Court:

Please incorporate into the Transcript for the appeal to the Circuit Court of Appeals for the Second Circuit of the above-entitled cause the following portions of the record:

1. Docket Entries.
2. Bill of Complaint.
3. Answer of Defendants.
4. Motion for Preliminary Injunction.
5. Order on Motion for Preliminary Injunction.
6. Defendants' Joinder of Issue on Motion of Plaintiff, and Order Thereon, for Preliminary Injunction against Defendants.
7. Decree and Order on Plaintiff's Motion for Preliminary Injunction.
8. Injunction.
9. Motion to Amend Defendants' Answer.
10. Amended Answer of Defendants.

[fol. 397] 11. Condensed statement in narrative form of testimony introduced upon the trial.

12. Plaintiff's Exhibits 1 to 33, inclusive.
13. Defendants' Exhibits A to I, inclusive.
14. Opinion of Judge Hincks.
15. Exception by Plaintiff.
16. Decree.
17. Petition for Appeal.
18. Order on Petition for Appeal.
19. Assignment of Errors.
20. Citation.
21. Præcipe for Transcript.
22. Clerk's Certificate.

Arthur E. Paige, Frank E. Paige, Counsel for Defendants. Robert P. Billings, Solicitor for Defendants.

Service of the foregoing Praecipe and receipt of a copy thereof, are acknowledged this 14th day of August, 1935.

Edmond M. Bartholow, Solicitor for Plaintiff, 2312 Spruce Street, Philadelphia, Pa.

August 13th, 1935.

FEP/EEG.

[fol. 398] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AMENDING PRAECIPE

It is hereby stipulated by and between Counsel for the respective parties that item "12" of the Praecipe filed August 14, 1935, be changed to read as follows:

"12. Plaintiff's Exhibits 1 to 32, inclusive."

Edmond Bartholow, Solicitor for Plaintiff.

September 19, 1935.

Robert P. Billings, Solicitor for Defendants.

September 19, 1935.

[fol. 399] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AMENDING PRAECIPE

It is hereby stipulated by and between Counsel for the respective parties that item "13." of the Praecipe filed August 14, 1935, be changed to read as follows:

"13. Defendants' Exhibits F to I, inclusive."

Frank E. Paige, Counsel for Defendants-Appellants.

August 29, 1935.

A. L. Ely, Counsel for Plaintiff-Appellee.

August 30, 1935.

[fol. 400] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AS TO CERTAIN EXHIBIT

It is hereby stipulated by and between Counsel for the respective parties that Defendant's Exhibit G shall not be included in the printed Transcript of Record, but shall go up to the Circuit Court of Appeals as a physical exhibit.

September 27, 1935.

Rockwell & Bartholow, Solicitors for Plaintiff-Appellee.

September 27, 1935.

Robert P. Billings, Solicitor for Defendants-Appellants.

[fol. 401] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AS TO RECORD

It is hereby stipulated and agreed that the foregoing is a true transcript of the record of the said District Court in the above-entitled matter as agreed on by the parties.

Dated, October —, 1935.

Edmond Bartholow, Solicitor for Plaintiff. Robert P. Billings, Solicitor for Defendants.

[fol. 402] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 403] UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

SAMUEL B. SMITH, Plaintiff-Appellee,

against

A. B. HALL and L. C. HALL, d. b. a. Hall Brothers, Defendants-Appellants

Before Manton, Swan and Chase, Circuit Judges

Appeal from the United States District Court for the District of Connecticut. Suit for infringement of patent. Decree for plaintiff; defendants appeal.
Reversed.

Arthur E. Paige, Esq., Frank E. Paige, Esq., Attorneys for Appellants.

Albert L. Ely, Esq., Edmund M. Bartholow, Esq., Geo. C. McConnaughey, Esq., Attorneys for Appellee.

MANTON, Circuit Judge:

This suit is for infringement of claim 1* of patent No. 1,262,860 issued April 16, 1918, on an application filed October 26, 1916, for a method for the incubation of eggs. [fol. 404] This claim was held valid and infringed in Smith v. Snow (294 U. S. 1) and Waxham v. Smith (294 U. S. 20). It embraces a method of hatching which makes it possible to increase the capacity of an incubator to many thousands

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* Claim 1 reads: The method of hatching a plurality of eggs by arranging them at different levels in a closed chamber having restricted openings of sufficient capacity for the escape of foul air without undue loss of moisture and applying a current of heated air, said current being created by means other than variations of temperature and of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature, whereby the air will be vitalized, the moisture conserved and the units of heat will be carried from the eggs in the more advanced stage of incubation to those in a less advanced stage for the purpose specified.

by the combination of two major steps. Instead of setting the entire capacity of an egg chamber at one time, the inventor proposed to fill the chamber with successive settings, preferably three or four days apart, so that when the chamber was filled it contained eggs in different stages of incubation, some in the endothermic phase and some in the exothermic phase. Smith propelled a strong draft of properly heated air over the eggs thus set in staged incubation "with sufficient velocity to circulate, diffuse, and maintain the air throughout the chamber at substantially the same temperature". In this way, the heat generating property of the further advanced eggs is offset by the heat absorbing properties of the less advanced eggs so that there is a continuous tendency to equalize the temperature throughout the cabinet at approximately the temperature of the introduced current of air.

However, this record differs from those before the Supreme Court in Smith v. Snow and Waxham v. Smith (supra) for here appellants have offered evidence of prior public use of the patented method and knowledge thereof by Milo Hastings. He had been a poultryman for the Department of Agriculture in 1906 and 1909, travelling extensively and visiting poultry plants and experimental stations operating incubators. In 1909, the "Dollar Hen", a [fol. 405] book written by him was published. Among other things he described there an idea for the plan of construction and operation of a new type of hatcher. He said:

"The eggs are kept in bulk in special cases which are turned as a whole and may rest on either of four sides. At hatching times the eggs are spread out in trays in a special hatching room, which is only large enough to accommodate chicks in the amount of one-sixth of the incubator capacity, for twice a week deliverings or one-third if weekly deliveries are desired.

"There are no pipes or other sources of heat in the egg chambers. All temperature regulation is by means of air heated (or cooled as the case may be) outside of the egg rooms and forced in to the egg rooms by a motor driven cone fan, maintaining a steady current of air, the rate of movement of which may be varied at will. The air movement maintained will always be sufficiently brisk, however, to prevent an uneven-ness (sic) of temperature in different parts of the room."

This, it is said, was a disclosure of forced draft and staged incubation in the method of incubating and hatching eggs. It is argued that twice a week and weekly deliveries necessarily contemplate that the eggs in the egg room would have to be of different ages and placed in staged incubation with the forced draft circulation maintaining an even temperature.

In 1910, Hastings built and operated an incubator of 6,000 egg capacity for one Davis of Brooklyn, N. Y. embodying these ideas. Drawings prepared for this trial under Hastings' supervision purport to illustrate this incubator and original photographs with published illustrations and descriptions are in the record. Hastings, Davis and his wife all testified that the apparatus and the method of hatching used in this incubator were such as indubitably to anticipate Smith. There can be no doubt that there was a closet chamber, in which the eggs were arranged in stacks of trays through which a current of heated air was blown [fol. 406] by a mechanical fan. The questioned point is whether or not staged incubation was used and known there. Hastings specifically testified that it was. Davis and his wife both testified that eggs were put in the chambers as they came in, once or twice a week. We should be unwilling to accept this oral testimony if it were uncorroborated. See Barbed Wire Patent Case, 143 U. S. 275,284; Dearing v. Winone, 155 U. S. 286,301; General Motors Corp. v. Leer Auto Supply Co., 60 Fed. 2, 904 (C. C. A. 2). But the necessary support is present here. An article in Poultry Culture, describing the later operations of Hastings at Muskogee, said: "• • • the moving air adds to or removes heat from the eggs with great rapidity. Because of this fact, eggs at all stages can be placed in the same trays of the Hasting Hatchery with little or no injury. Mr. Hastings hatched several thousand eggs under such conditions in his Brooklyn (Davis) plant last year." This was published before any motive for so declaring could be possible. Further indication that staged incubation was used at the Davis plant is taken from the Hastings' application for a patent, and the file wrapper relating to it. This application No. 624,885 was filed May 3, 1911. It was designed to embody the invention practiced by Hastings at the Davis plant, and is witnessed by Mr. Davis and Isabel Carkhuff, who present Mrs. Davis. The drawing of the apparatus

shows an undivided egg chamber down through which air is driven by a fan so that it circulates through a source of heat and then is drawn through the back of the fan and again started on its circuit. There are no separate chambers shown and in his application Hastings makes no men-
[fol. 407] tion of any way of providing separate chambers with different temperatures. In view of Hastings' avowed intention of incubating large numbers of eggs at the same time, and his substantiated declarations that he did have the incubator at Brooklyn operating with two thousand eggs in it, he must have had eggs of varying stages of incubation there, since it is clear that the eggs were supplied in relatively small amounts. There is in the record documentary evidence specifically pointing out the fact that staged incubation was embraced in Hastings' idea. His original application was undirected by counsel. When he met with difficulties in putting the patent through, he employed attorneys whose brief on the appeal to the three Examiners in Chief contained the following:

"The problem has been to enable the incubating operations to be carried on continuously, if so desired, with eggs at all stages of development, and with all of a vast number of eggs subjected to the same temperature and atmospheric conditions best adapted for the development of the embryo, • • •

The simple way in which applicant overcame the difficulty was through the provision of a mechanically operated air forcing means which would force a rapid circulation of air through the whole collection of eggs in the chamber and past the heater. The mechanical air forcing means is an essential factor; if heat is to be conserved and the conditions maintained uniform; for a circulation, which is due to differences in temperature in different portions of the circulator system, as, for example, where the air is circulated by the effect of the heater in causing the heated air to rise and pass into or through the incubating chamber, will not answer for large collections of eggs. • • •

In the Hastings hatchery, a current of air is blown past each and every egg at the rate of thirty feet per minute and this rapidly moving air quickly bringing the temperature of
[fol. 408] the egg to approximately that of the air. This method of heating keeps the temperature of the eggs in the advanced state of incubation down within a few degrees

of that of the air, the exact difference being regulated at will by adjusting the speed of the fan. When properly adjusted the same blast of air used to heat fresh eggs does equally well for eggs in the advanced stages just as the same temperature of the body of the hen incubates the eggs at all stages of development, without recourse on the hen's part to the 'hatching fever', erroneously supposed to explain the higher temperature of eggs at a more advanced stage of development. Owing to this fact eggs at all stages may be handled simultaneously with uniformly good results, * * * The operator of a Mechanical Draft plant may switch as much 'fresh' or outdoor air into this inner circulation as he is willing to heat. The inventor's practice is to use but a small portion of outdoor air except in cases of excessive humidity, when a large exchange of air is utilized as a simplest means of increasing evaporation. * * *

The introduction of moisture from the mist spray nozzles in the fan boxes to increase humidity, or running in outside air to decrease it as indicated by egg weights or air cell shrinkage is sufficient for ordinary hatching practice."

[fol. 409] The application for a patent was denied by two of the examiners, with one dissenting. Without funds he pursued his application no further.

There can be no question that the quoted language expressed the idea later patented by Smith. The argument that "eggs in different stages may be handled simultaneously" certainly came from the inventor and not the attorneys. Although this specific point is not made in the original application filed by Hastings, his first specification was: "My invention is that of a hatchery in which I secure better ventilation and a more uniform temperature throughout the hatching chamber by substituting a forced draft for gravity drafts." In view of his avowed aim of continuous hatching in great numbers, there is implicit the idea that the eggs will not be in the same stages. And the application and file wrapper make no mention of different chambers in which eggs of equal maturity would be placed, with the consequent necessity of adjusting the temperature of the air current to the varying requirements of the different stages. In fact, he mentions "uniform ventilation and an even temperature throughout all parts of the hatching chamber. We think the attorney's brief does not represent a new idea but a clarification of an old one.

An abandoned application can be used to clarify the character of a claimed prior use (Interurban Ry. &c. Co. v Westinghouse El. & Mfg. Co., 186 Fed. 166 (C. C. A. 6)) although alone it might not be acceptable to establish prior use of Wright Co. v. Herring-Curtiss Co., 177 Fed. 257 (C. C. N. Y. 1910).

There is uncontradicted testimony that this Davis hatchery was an operative success. It was in use during the [fol. 410] hatching seasons of 1910 and 1911. Its discontinuance is explained by the sponsor's financial reverses and its destruction by the fact that it was built within the cellar of the leased farmhouse which Davis had to leave.

Hastings did not abandon the idea. He promptly took it up on a larger scale at Muskogee, where he built a 30,000 egg plant and embodying the same features. This ran through the hatching seasons of 1912 and 1913. It was similar to the one built for Davis in Brooklyn. Photographs of it were taken at the time of its use; articles which appeared in newspapers and technical publications, with photographs of the incubator, are in the record. The principle of a forced draft is conclusively proven, and it appears that Hastings realized that eggs in different stages of incubation could be included in the same closed circuit. Drawings of this incubator were produced and received in evidence. That this incubator used a forced draft for the distribution of heat to maintain equal temperature throughout all the eggs in the seven separate incubating chambers, is clearly shown. In these chambers, the air which entered at the time was driven by the forced draft vertically, down toward the eggs trays and was returned by the open space beneath the trays, to the fan or blower from which the circuit passed the heat or continued on a complete continuous circuit. The drawing represents the machine as described in several articles with photographic illustrations. The electrical contractor who installed the fans and electrical controls testified. A photograph of the motor driven blower in the incubator and the description appeared in the Electrical World of July 6, 1912. That description dis- [fol. 411] closed the use of a motor-driven blower to force evenly heated air to all parts of the tray racks.

An album of original photographs of the motor-driven blower and the superimposed egg trays which slide in the incubator chambers are shown. The practice of the method

of Smith's patent is testified to by witnesses who saw the plant operated and who participated in its operation during the two hatching seasons.

In this operation, Hastings testified that the principle of staged incubation along with forced draft circulation was used.

Although the patent has been held valid in a number of cases, only two Circuit Courts have considered Hastings. In a prior litigation (Buckeye v. Wolf, 291 Fed. 252 (N. D. C.), affd. 296 Fed. 680 (C. C. A. 6)), there was introduced the publication in The Dollar Hen and other publications as well as the Hastings' application and there it was found that these did not describe an anticipation of Smith's method. While the patent application is referred to, no mention is made of the brief of Hastings' patent attorneys. Hastings was not a witness nor was any witness called to testify to what his prior use had been. In Buckeye v. Cooley (17 Fed. 2,453) the same evidence was in the record and Hastings was a witness, but the Third Circuit found his testimony unconvincing and that alleged prior uses were not of Smith's method because they did not provide for a regular current of air. This is the first time the prior uses at the Davis place and at Muskogee have been so fully presented and substantiated.

[fol. 412] On the record now before the court, it is impossible to agree that Smith's discovery was "not known or used by others in this country before his invention or discovery thereof."

Decree reversed.

[fol. 413] UNITED STATES CIRCUIT COURT OF APPEALS, SECOND CIRCUIT

At a stated term of the United States Circuit Court of Appeals in and for the Second Circuit, held at the United States Court House in the City of New York, on the 13th day of April one thousand nine hundred and thirty-six.

Present: Hon. Martin T. Manton, Hon. Thomas W. Swan, Hon. Harrie B. Chase, Circuit Judges.

SAMUEL B. SMITH, Plaintiff-Appellee,

vs.

A. B. HALL and L. C. HALL, d. b. a. Hall Brothers, Defendants-Appellants

Appeal form the District Court of the United States for the District of Connecticut

This cause came on to be heard on the transcript of record from the District Court of the United States for the District of Connecticut, and was argued by counsel.

On consideration whereof, it is now hereby ordered, adjudged, and decreed that the decree of said District Court be and it hereby is reversed with costs.

It is further ordered that a Mandate issue to the said District Court in accordance with this decree.

Wm. Parkin, Clerk.

[fol. 414] [Endorsed:] United States Circuit Court of Appeals, Second Circuit. Samuel B. Smith vs. A. B. Hall and L. C. Hall. Order for mandate. United States Circuit Court of Appeals, Second Circuit. Filed Apr. 13, 1936. William Parkin, Clerk.

[fol. 415] UNITED STATES OF AMERICA,
Southern District of New York:

I, William Parkin, Clerk of the United States Circuit Court of Appeals for the Second Circuit, do hereby certify that the foregoing pages, numbered from 1 to 414, inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the case of Samuel B. Smith, Plaintiff-Appellee, against A. B. Hall and L. C. Hall, d. b. a. Hall Brothers, Defendants-Appellants, as the same remain of record and on file in my office.

In testimony whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of April, in the year of our Lord one thousand nine hundred and thirty-six, and of the Independence of the said United States the one hundred and sixtieth.

Wm. Parkin, Clerk. (Seal United States Circuit Court of Appeals, Second Circuit.)

[fol. 416] SUPREME COURT OF THE UNITED STATES

ORDER ALLOWING CERTIORARI—Filed May 25, 1936

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Second Circuit is granted.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

(7988-C)

DEFENDANT'S EXHIBIT F
For Identification

DEFENDANT'S EXHIBIT D E

DEPARTMENT OF COMMERCE
PATENT OFFICE

To all persons to whom these presents shall come, Greeting:

S TO CERTIFY that the annexed is a true copy from the records of this office of the File Wrapper, Contents and Drawing, the matter of the

Abandoned Application of

Milo Hastings,

Filed May 5, 1911, Serial Num.: 624,683,

for

provement in Hatchery for the Eggs of Domestic Fowl.

In Testimony Whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this third day of October in the year of our Lord, one thousand nine hundred and twenty-five and of the Independence of the United States of America the one hundred and fiftieth.

Div. 38

Division of Appl. No. 624885 Filed 191-

PATENT No.

Name Mich[illegible] Co[illegible]

Corp. of Delaware, Corporation, of New York

N.Y. assgs. of New York

Residence Brooklyn,

County of New York

State of

Inventor Hatchery for the Eggs of Domestic Fowl.

Petition	April 25	191
Affidavit	" "	191
Specification	May 3	191
Oath of	Apr. 25	191
Model or Drawing		191
Final Fee Cash	$15. Apr. 28	191
" " Cert.		191
Appl. filed complete	May 3	191

Examined		
Allowed		
Notice of Allowance		191
Final Fee Cash		191
" " Cert.		191

Patented

Attorney Church & Church — Mad. Ave.

In Testimony Whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington,

this 2nd day of October in the year of our Lord one thousand nine hundred and twenty-five and of the Independence of the United States of America the one hundred and fiftieth.

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE
WASHINGTON

APRIL 28, 1911.

Mr. Milo Hastings,
Kings Highway & E. 23rd Street,
Brooklyn, N. Y.

Sir:

The incomplete money order for $15.00 received with the application of Milo Hastings, is herewith returned as same cannot be accepted by this Office.

Upon receipt of complete money order the same will be filed as directed.

Respectfully,

A. L. Pope
Acting Chief Clerk.

Enclosure.

PETITION.

[FROM RULES OF PRACTICE, U. S. PATENT OFFICE, PAGE 60, FORM 4.]

To the Commissioner of Patents:

Your petitioner, Milo Hastings

citizen / subject } of the United States

and resident of Brooklyn

in the county of Kings, and State of New York

whose post-office address is { No. / street } Kings Highway and E. 23d Street

prays that Letters Patent may be granted to him

for the improvement in a hatchery for the eggs of domestic fowl

as set forth in the annexed specification

And hereby appoint*

of , State of , attorney

with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith.

Signed at Brooklyn in the County of Kings and State of New York, this 5th day of April

Inventor's full name: Milo Hastings

* If the power of attorney is given to a firm, the full name of each member of the firm must be inserted in the blank.

Note.—In the case of the assignment of the whole interest in the invention, the petition and oath must be executed by the assignee, if alive, upon it the patent is to issue to an assignee. If the inventor be dead, it may be made by the administrator, executor, or legal representative.

SPECIFICATION.

To all whom it may concern:

Be it known that I, Milo Hastings, a citizen of the United States, residing at Brooklyn, in the county of Kings, and the state of New York, - have invented a new and useful hatchery for the eggs of domestic fowl, of which the following is a specification:

My invention is that of a hatchery in which I secure better ventilation and a more uniform temperature throughout the hatching chamber by substituting a forced draft for gravity drafts.

I attained this end by the mechanism illustrated in the accompanying drawing. This represents a vertical section of the hatchery, in which A is a hatching chamber wherein are placed the eggs, B is an electric fan which is to run constantly, maintaining a steady current of air through the hatching chamber, C is a heater, D any uniform or regulated source of heat. I use a gas flame, the pressure of which is controlled by a governor, EE ar fabrics or perforated partitions for the purpose of causing an even horizontal distribution of air throughout the hatching chamber.

I believe it to be best to cause the air to enter the hatching chamber from above, but my invention is not limited to any particular circulation or movement of the air and by the use of the fan, the gravity drafts may be overcome, and the air caused to move in any desired direction.

ventilation I secure through creaks around the door of the hatching chamber or other small openings in any part of the air circuit. The air being constantly in motion, requires less regeneration than dead air.

The part of my apparatus that is new, and which has not before been used in connection with hatching devices, is that of the fan, and this I maintain to be of distinct utility in securing uniform ventilation and an even temperature throughout all parts of the hatching chamber.

I claim: The combination in a hatchery for the eggs of domestic fowl, of a room or chamber for holding eggs to be incubated and a fan-pump, or other mechanical device with moving parts for causing a circulation of air in or through such chamber.

Witness: Edgar Chamberlain
Jeannette Cohen

Miles Hastings

252

OATH

To accompany an application for United States Patent.

Mils Hastings
Full name

the above-named petitioner, being sworn (or affirmed), deposes and says that he is a citizen of the United States

and resides at Kings Highway and E. 23d Street Brooklyn Greater New York

that he verily believes himself

to be the original, first and sole inventor of the improvement in a hatchery for the eggs of domestic fowl

described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him or his legal representatives or assigns more than twelve months prior to this application; and that no application for patent on said improvement has been filed by him or his representatives or assigns in any country foreign to the United States, except as follows:

none filed

Inventor's full name: Mils Hastings

Sworn to and subscribed before me this 24th day of April, 191[illegible]

J. C. Fairman
(Signature of officer.)

Notary Public #8
(Official character.)

[illegible]

255

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE
WASHINGTON

April 28, 1911.

Sir:

I have to acknowledge the receipt of your informal application for Patent, the title of which is improvement in Hatchery for the Eggs of Domestic Fowls.

This application is informal because you have failed to sign the specification, when signed, your signature must be attested by two witnesses, papers are accordingly returned herewith.

The government filing fee of $15 is also required.

This application must be completed within one year from the above date.

Very respectfully,

E. B. Moore.
Commissioner of Patents.

Milo Hastings,
Kings Highway & E. 23rd St.,
Brooklyn, N.Y.

Note.—In order to constitute an application for a patent, the inventor is by law required to furnish his petition, specification, oath, and drawings (where the nature of the case admits of drawings) and to pay the required fee.
No application is considered complete, nor can any official action be had thereon, until all the parts, as here specified, are furnished in due form by the inventor or applicant.

Insert name of 4th ward

Paper No. 8

DEPARTMENT OF THE INTERIOR

UNITED STATES PATENT OFFICE

WASHINGTON May 24, 1911.

323

Milo Hastings,

King's Highway and E. 23rd St.,

Brooklyn, N.Y.

Please find below a communication from the EXAMINER in charge of your application.

Ser. No. 624,835, filed May 3, 1911: Hatchery for the Eggs of Domestic Fowl.

E. B. Allen

Commissioner of Patents.

Since the oath filed bears no venue, applicant must either file a new oath in proper form or else furnish a certificate from the notary who administered the oath, in accordance with the practice recited in ex parte Delavoye, 124 O.G., 626.

In line 14 of page 1 the word "vertical" is misspelled. In line 15 the words -"the eggs" should be canceled and inserted before "are".

The claim is informal as being alternative in form and applicant should cancel the words "room or" in line 2 and the phrase "or.....moving parts".

The claim is rejected on

Hawkins, 725,079, April 14, 1903,
Claim 43, X-ref. or
Osborne, 806,325, April 20, 1906,

It is considered that applicant's arrangement is merely the double use of the arrangement there shown and that there is no particular combination between the forced draft and an incubator since various forms of natural draft passages are shown in the well known forms of incubator.

E. B. Ellis,
Ex.

June 19, 1914.

Commissioner of Patents,

Washington, D.C.

Sir:

Refering to paper No. 2, Ser. No. 624,688, filed May 8, 1911: Hatchery for the Eggs of Domestic Fowl—

If you will send me an additional blank, I will file a new oath as suggested.

I authorize you to correct the spelling of the word "vertical" in line 14, and to transfer the words "the eggs" inserting same before "are" in line 15, page 1 of the specification.

I authorize you to eliminate the alternative features of the claim by striking out the words "room or" in line two and the words "fan, pump, or other" in lines three and four.

I maintain that the rejection on
Hamilton, 725,079, April 14, 1903,
Osborne, 895,885, April 28, 1908,
is beside the point. These patents refer to the use of forced ventilation for purposes unrelated to incubation. The use of a forced draft in combination with an incubator I contend to be patentable, as it is a distinctly new use of a well known mechanical device, which in its new use required invention to result and which has distinct utility.

To contend that the new use is not patentable because passages for natural drafts exist in well known types of incubators is unsound; thousands of well known patents including the two cited by your examiner would be thrown out by a similar line of reasoning. There are scores of existing incubator patents based upon the form of these natural draft passages, and I maintain that the introduction of a device for generating a forced draft is of far greater uniqueness and utility than the varying devices for utilizing natural drafts.

For the reasons above given, I beg for a re-examination of my application.

Respectfully yours,

Miles H

DEPARTMENT OF THE INTERIOR

UNITED STATES PATENT OFFICE,

WASHINGTON July 13, 1911.

Milo Hastings,

Kings Highway and East 23rd Street,

New York, N. Y.

Please find below a communication from the EXAMINER in charge of your application.

Ser. No. 624,835, filed May 23, 1911, for Hatchery for the Eggs of Domestic Fowl.

E. B. Ellis

Commissioner of Patents.

In response to the communication filed June 30, 1911.

A blank for the new Oath required is herewith enclosed.

The claim is again rejected on Hawkins or Osborne of record for the reasons stated. This rejection is made final under the decision in Ex parte Miller, 139 O. G. 750 and applicant's appeal lies to the Board of Examiners-in-Chief.

G. R. Isle,

Ex.

FIELD BROTHERS
[illegible] E. 125th ST
NEW YORK CITY

624,885 5
Oath

July 22 1911

Commissioner of Patents
Washington D.C.

Sir:

Inclosed is a new oath for Application 624,885, filed May 3, 1911 - Hatching for the Eggs of Domestic Fowl. as per your communication of May 26, 1911.

Respectfully yours
Chas. Keating

OATH.

To accompany an application for United States Patent.

State of New York
County of New York } ss:

Mila Hastings

the above-named petitioner, being sworn (or affirmed), deposes and says that he is a citizen of the United States of America; that his residence is at Kings Highway and East 23d street in the Borough of Brooklyn, City of New York, county of Kings, State of New York; that he verily believes himself to be the original, first, and sole inventor of the improvement in "A Hatchery for the eggs of domestic fowl" described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him or his legal representatives or assigns more than twelve months prior to this application; and that no application for patent on said improvement has been filed by him or his representatives or assigns in any country foreign to the United States except as follows: —

Inventor's full name: Mila Hastings

Subscribed and sworn to before me this 21st day of July, 1914.

J. J. Gahman
(Signature of person taking oath.)
Notary Public
(Official character.)

New York
(State.)

In case the oath will be made by the administrator of, executor of, the guardian of, trustee of, or legal representative of the inventor, the fact that the party named as inventor is dead, and that the party making the oath is the administrator, executor, guardian, trustee, or legal representative of the inventor, and a citizen of the United States, or [illegible] of [illegible], as the case may be, must be stated.

In case the application has been filed, and in such case give date of filing the same. If no application has been filed, the oath or affirmation is to be made by the inventor, if living, and must be made before some officer having authority to administer oaths within the United States, who must be duly authorized to act in the premises, and who must not be the attorney or agent of the party making the oath, or in any way interested in the application of which it is to form a part. The officer must affix his official seal in all cases where a seal is required by the laws of the jurisdiction in which it is made. The oath or affirmation must be signed in the presence of the officer before whom it is made, and must be subscribed by the party making it. The penalty for making a false oath or affirmation renders the guilty party liable to conviction of perjury. No authority should be cited unless it is directly applicable and pertinent.

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DEPARTMENT OF THE INTERIOR

UNITED STATES PATENT OFFICE

WASHINGTON Aug. 14, 1911.

Eric Hastings,

King's Highway and 23rd St.,

Brooklyn, N.Y.

Please find below a communication from the EXAMINER in charge of your application.

Ser. No. 624,895. Filed May 3, 1911: Hatchery for the Eggs of Domestic Fowl.

E. B. Moore.

Commissioner of Patents.

In response to the communication filed July 24, 1911:

The new oath required has been received.

The application stands under final rejection of the date of July 28, 1911, and periods which applicant must act will continue with that date.

G. Brooke

Ex.

260

Pole Latch

Hon. Commissioner of Patents,

Sir:

I hereby appoint

Messrs. Church & Church (a firm composed of Melville Church and Joseph B. Church) of Washington, D. C., as my attorneys in the matter of my application Serial No. 624,885, filed May 3, 1911, Improvements in Latches for the Eggs of Domestic Fowl, with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent Office connected therewith.

Mitt Hastings

IN THE UNITED STATES PATENT OFFICE.

Milo Hastings;

Hatchery for Eggs of Domestic Fowl;

Filed May 3, 1911;

Serial No. 624,855.

ROOM 378

Hon. Commissioner of Patents,

Sir:-

In reply to Office letter of July 15, 1911. The present attorneys have but recently been called into this case, and after a careful consideration of the application, together with a mass of data and information derived from a practical hatchery of large capacity which is being operated by the applicant, they are of the opinion that the invention has not been fully comprehended by the Examiner, due, perhaps, largely to the lack of skill of the applicant himself in the handling of applications for patents, or to his lack of knowledge as to the points which should be presented for the Examiner's consideration.

For this reason we have to request that the case be further considered in connection with the claim presented herein, and that said claim be entered as a substitute for the present claim, a course which we believe is justifiable under the circumstances, although we also request that, if the Examiner does not feel at liberty to re-examine the application, the claim be entered for the purposes of appeal.

Please amend the case by canceling the present claim and substituting the following therefor:

"A hatchery for eggs embodying an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, whereby said eggs will be arranged in layers one above the other, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for forcing a uniform circulation of air through all parts of the chamber and past the heater, whereby convexion currents will be eliminated, temperature and gaseous stratification of the air in the chamber overcome, and the eggs subjected to the influence of air of the same temperature and composition."

REMARKS.

The problem presented to applicant was one which finds no analogy in the small incubators such as are commonly used throughout the country, for in them the chamber is of such small size and the eggs located so close together in a vertical direction that the disturbing influences due to convexion currents and air stratification amount to nothing. It is well known that eggs during the process of incubation exert a very marked influence on the air surrounding them, as the temperature of the eggs themselves varies in accordance with the stage of their development and the gaseous emanations tend to produce vitiated conditions which exert a marked influence upon the eggs themselves, and especially upon adjacent eggs, if the eggs are at different stages of their development. The eggs themselves thus produce both temperature and gaseous stratification of the air in the chamber, but this is easily overcome in a small incubator by ordinary convexion currents such as are set up by the heater or by the temperature of the eggs themselves, but in

a large hatchery where many hundreds, and even thousands, of eggs are being continually advanced in the process of incubation the ordinary means for causing the circulation of air by convection currents through and in the incubating chamber has been demonstrated as being totally inadequate, and this is believed to be one of the principal reasons why, up to the present time, hatcheries of large capacity have proven to be practical failures, except, perhaps, in a few isolated instances, where natural temperature and moisture conditions of the whole atmosphere have been exceptionally favorable. Applicant's invention, on the other hand, provides a means whereby success is practically assured, regardless of the location of the hatchery, and such success is believed to be due to the fact that, he has by a painstaking and very costly series of experiments, discovered that the temperature and gaseous stratification in the incubating chamber must be overcome by a mechanically forced circulation of the air which will insure a correct and uniform influence of the air upon all of the eggs in the incubating chamber, and this forced circulation must be such as to overcome the counteracting influence of the eggs upon the air when said eggs are in the different stages of incubation. This feature has seemingly never been effectually worked out by investigators along this line prior to applicant, and it seems to the attorneys to present all of the characteristics of a patentable invention of the highest order. The fact that air both heated and cooled has been forced into and through apartments and vehicles, such as railway cars, etc., does not suggest the idea of overcoming the difficulties encountered in the practical operation of incubators of large capacity, especially as the conditions which exist in such hatcheries have not

heretofore been adequately understood, and the remedies for the conditions as applied to incubators of small capacity were totally inadequate.

In view of the fact that, if this amendment is admitted for the purpose of appeal only, the appeal should be taken before the 15th of July, it is requested that the foregoing amendment and argument be considered promptly or in ample time for the appeal to be filed within the statutory time.

Respectfully,

MILO HASTINGS,

By Schmuck & Schmuck

His Attorneys.

May 24, 1912.

Div. 38 Docket 378 MHD GJD Paper No. 9

Commissioner of Patents, Washington, D. C.

All communications respecting this application should give the serial number, date of filing, and title of invention.

DEPARTMENT OF THE INTERIOR

UNITED STATES PATENT OFFICE

WASHINGTON June 25, 1912.

Milo Hastings,

c/o Church and Church,

Wash. D. C.

Herewith is sent a communication from the EXAMINER in charge of your application.

Ser. No. 624,885, filed May 3, 1911, for Hatchery for the Eggs of Domestic Fowl.

E. B. Moore

Commissioner of Patents.

In response to the communication filed May 24, 1912.

The claim presented by the amendment of the above date has been entered for the purposes of appeal. It is considered that the references of record are anticipations of this claim and the case stands under the final rejection of July 15, 1911.

G. A. Lee,

Ex.

M. M. D.

IN THE UNITED STATES PATENT OFFICE.

Milo Hastings;
Hatchery for Eggs of Domestic Fowl;
Filed May 3, 1911;
Serial No. 624,885.

-ROOM 378.

APPEAL TO THE BOARD OF EXAMINERS-IN-CHIEF.

Hon. Commissioner of Patents,

Sir:

I hereby appeal to the Board of Examiners-in-Chief from the decision of the Primary Examiner, rejecting finally my above entitled application, and allege as ground therefor, that the Examiner erred in holding the claim presented by the amendment of May 24, 1912 to be anticipated by the references of record.

An oral hearing is requested.

Respectfully,

Milo Hastings,

By Church & Church

His Attorneys.

July 8, 1912.

DEPARTMENT OF THE INTERIOR,

UNITED STATES PATENT OFFICE.

Washington, D. C. July 18, 1913.

MID-LINE

In re application
Milo Hastings;
Ser. No. 624,885;
Filed May 5, 1911;
Hatchery for the Eggs of Domestic Fowl.

Before the
BOARD of EXAMINERS-in-CHIEF
on APPEAL.

Examiner's Statement.

The claim rejected is -

A hatchery for eggs embodying an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, whereby said eggs will be arranged in layers one above the other, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for forcing a uniform circulation of air through all parts of the chamber and past the heater, whereby convection currents will be eliminated, temperature and gaseous stratification of the air in the chamber overcome, and the eggs subjected to the influence of air of the same temperature and composition.

The references cited are -

Hawkins, 758,079, April 14, 1903.
Osborne, 886,325, April 28, 1908.

In the device under consideration applicant has supplied an electric fan in an ordinary type of incubator, having an egg chamber and a suitable heater, in order to produce a forced circulation of air through all parts of the chamber.

The references, Hawkins and Osborne, were cited to show that it is old to use a mechanical means to produce a forced circulation. The claim was rejected upon the ground that it involved mere double use of the devices there shown and that applicant had applied them to an old type of incubator such as shown by

Ser. No. 534,685.....2.
Ex'r's Statement.

?

920,719, May 18, 1909, wherein it is shown common to so arrange the device that a natural circulation of air will be produced by the change in temperature thereof. It has not been shown that any new results are obtained other than those always procured through the substitution of forced for natural draft.

It is therefore believed that the device is a most obvious example of the double use of an old apparatus and that the claim was properly rejected upon this ground.

Respectfully submitted,

J. A. Ide

Examiner, Division 38.

11-14-D

Clerk

Appl. No. 5385 Form No. 12
Notice of Hearing

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE
WASHINGTON

July 19, 1912.

Sir:

The case of Milo Hastings

Serial No. 624875 will be heard by the Examiners-in-Chief on the 13th day of December 1912.

It is the sixth case on the assignment for that day.

The hearings will commence at one o'clock, and as soon as the argument in one case is concluded the succeeding case will be taken up.

If any party, or his attorney, shall not appear when the case is called, his right to an oral hearing will be regarded as waived.

The time allowed for arguments is as follows:

Ex parte cases, thirty minutes;
Motions, thirty minutes, each side;
Interference appeals, final hearing, one hour each side.

By special leave, obtained before the argument is commenced, the time may be extended.

The appellant shall have the right to open and conclude in interference cases, and in such case a full and fair opening must be made.

Briefs in interference appeals must be filed in accordance with the provisions of Rule 147.

Respectfully,

Commissioner of Patents.

To Church & Church Esqs.
McGill Bldg.
Washington D.C.

To _____

_____

_____

UNITED STATES PATENT OFFICE.

In re application
Milo Hastings;
Serial No. 624,685;
Filed May 3, 1911;
Hatchery for the Eggs of Domestic Fowl.

Before the
BOARD OF EXAMINERS-in-CHIEF
on APPEAL.

BRIEF FOR APPLICANT.

The invention or discovery made by this applicant and which now seems so simple and obvious to the Primary Examiner is one which has only been developed as a result of years of study and effort. The problems confronting experimentors in the art of egg incubation have been studied from many different angles, some investigators holding the view that nature must be simulated in every possible way if satisfactory results are to be attained, and others believing that science can improve upon nature.

Many efforts have been made to carry on the incubation of eggs on an extensive scale, but as a rule such efforts have been unsuccessful, save in a few instances where climatic and atmospheric conditions have been exceptionally favorable (for example, the large incubating plants of Ancient Egypt). Other efforts to carry on incubation on an extensive scale have invariably failed, unless the operations have been sub-divided, so to speak, into a multiplicity of units, as, for example, by the

employment of a large number of relatively small incubators each practically independent of the other. The problem has been to enable the incubating operations to be carried on continuously, if so desired, with eggs at all stages of development, and with all of a vast number of eggs subjected to the same temperature and atmospheric conditions best adapted for the development of the embryo. An incubator such as is contemplated is in sharp contrast to the ordinary incubator in that it is designed to handle simultaneously hundreds of thousands of eggs and, therefore, requires a relatively large chamber for accommodating them. Plants actually constructed by applicant have been competent to handle from thirty thousand to one hundred and fifty thousand eggs and upwards at one time, for it is only by the handling of such large numbers of eggs that the expense of scientific handling and incubating operations can be reduced to a minimum.

In a small incubator holding from fifty to a few hundred eggs, the incubating chamber is of only a few cubic feet capacity and the eggs are almost invariably arranged in a single horizontal layer with which arrangement it becomes a comparatively simple matter to regulate the heat and moisture conditions, but should there be a failure to do so, the resultant loss would be quite insignificant. With a large hatchery, on the other hand, containing one hundred thousand eggs, for example, failure of a batch would mean financial ruin. While these considerations do not enter into the questions of invention and patentability to any great extent, attention is

directed to them in order that the Board may appreciate the situation confronting one who undertakes to accomplish the seemingly simple results necessary for successful incubation.

During the incubating process the eggs themselves, especially if assembled in large numbers close together, exert a most marked influence upon the surrounding air, both with respect to temperature and composition, and owing to their inherent temperature changes, they exert a most marked influence upon adjacent eggs due to radiation. For example, during the initial stage of incubation, the eggs absorb heat whereby their temperature is raised, but during the final stages, the vital processes generate heat and in practice it is found that with vast numbers of eggs assembled in a single compartment and with eggs at all stages of incubation but very little extraneous heat need be supplied, because the eggs in the later stages of development supply the necessary heat for the eggs in the earlier stages of development. In practice, however, a source of heat is always maintained in order to permit of proper regulation.

Insofar as moisture conditions are concerned, it seems to be a problem of maintaining the atmosphere at the proper degree of humidity to insure only a proper evaporation of the internal moisture of the eggs.

It is obvious that the conditions set up by the eggs themselves will produce temperature stratification in the egg chamber, and in additions emanations from the eggs of a gaseous nature will accentuate the stratification in the chamber. In a large collection of eggs in which

incubation has started the temperature at the center of the collection will be raised very much higher than the temperature nearer the bottom and sides of the collection, from which it appears very clear that the reason for the success of the small incubator with its single layer of eggs is due to the fact that with such a small egg chamber uniform conditions are more easily maintained and it is only necessary to watch the condition of the particular horizontal air stratum in which the eggs are located. Such ideal conditions cannot, however, be maintained in a large incubating chamber containing many superposed layers of eggs. The simple way in which applicant overcame the difficulty was through the provision of a mechanically operated air forcing means which would force a rapid circulation of air through the whole collection of eggs in the chamber and past the heater. The mechanical air forcing means is an essential factor, if heat is to be conserved and the conditions maintained uniform; for a circulation, which is due to differences in temperature in different portions of the circulatory system, as, for example, where the air is circulated by the effect of the heater in causing the heated air to rise and pass into or through the incubating chamber, will not answer for large collections of eggs. Its efficacy is doubtful even in a small incubator, for the reason that at the time when the circulation should be most active, i.e., during the final stages of development of the embryo, the embryo is itself generating the greatest quantity of heat, which will counteract the circulating tendency of the heater on the air. Furthermore in the incubating process during the final stages of the development the external heat supplied must be greatly reduced and this of itself would reduce the rate of circulation, and consequently, the heat and gaseous

stratification would be augmented rather than prevented. The claim of the application includes as its mechanical elements an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for forcing a uniform circulation of air through all parts of the chamber and past the heater. It is through the instrumentality of these elements that the temperature and gaseous stratification of the air in the chamber is overcome, and the eggs are uniformly subjected to the influence of air of the same temperature and composition. In other words, regardless of the number of superposed layers of eggs in the chamber, each egg will be subjected to the conditions best calculated to promote the development of the embryo and it becomes a comparatively simple matter to regulate both the temperature, the humidity or the gaseous composition of the air, inasmuch as all of the air is drawn positively through a circulatory system and may be modified at any point during its circulation. By providing a forced circulation the influence of the eggs themselves becomes a negligible factor, a result which is impossible where temperature conditions are relied upon to effect the circulation and cause a uniform distribution of the air to the eggs.

In treating this subject, the inventor himself says:

"Large room hatcheries have been tried before and have failed because their builders did not know how to overcome the inequalities of temperature due to the convexion currents of air or gravity drafts set up within the chamber by the difference in temperature of walls, eggs, or other objects, and also because with dead air it was impossible to keep

large quantities of incubating eggs from overheating in the center of the mass. In the Hastings [illegible] temperature stratification is overcome by forcing through the hatching chamber a mechanically [illegible] blast of air. This rapidly moving air evenly distributed throughout the cross section of its movement by suitable gratings, results in a more even distribution of heat within a hatching chamber holding many thousands of eggs than is secured in a single egg tray of the most perfect dead air machine. In the practical plant the entire volume of air passes through the fan every thirty seconds.

"In the Hastings hatchery, a current of air is blown [illegible] every 30 at the rate of thirty feet [illegible] air [illegible] temperature of the eggs to [illegible] [illegible] [illegible]

seems to be helplessly confused in the minds of both incubator makers and users. The editor of Farm Poultry once criticised the writer for his theory concerning humidity on the grounds that it disagreed with the teachings of the U. S. Weather Bureau. The amusing fact of the incident was that shortly before Mr. Marvin, in charge of the humidity investigations of the Weather Bureau, had complimented the writer for his 'valuable contribution' to the science of humidity.

The moisture problem in incubation is only a matter of causing the correct amount of water to evaporate from the average egg. The function of the evaporation of a liquid into the air is dependent upon three factors; temperature, rate of air movement, and the saturation deficit, or difference between the vapor pressure (humidity) of the air and the vapor pressure of the liquid. With a gravity draft incubator the amount of air movement is dependent on external temperature while the saturation deficit is wholly determined by the humidity of the external air from whence the hatching chamber atmosphere is drawn. This introduces two weather variables into the problem and while it is theoretically possible to correct for these, in practice it is not. The Hastings Hatchery having a confined atmosphere and a uniform rate of air movement places the humidity problem under a ready control. Damp air may be dried with calcium chloride, if one has other reasons for not wishing to change the atmosphere. Because of the rapid air movement such artificial drying will rarely be necessary in American practice if the writer's experience in hatching during warm foggy weather on the Gulf Coast of Texas is a fair criterion.

The Dept. of Agriculture took out a patent on a very accurate moisture controlling device invented by the writer and, when desired, the Hatchery will be equipped with automatic humidifiers based on the same principle. The introduction of moisture from the mist spray nozzles in the fan boxes to increase humidity, or running in outside air to decrease it as indicated by dew weights or air cell shrinkage is sufficient for ordinary hatching practice."

There can be no question in regard to applicant having advanced this art, nor in regard to the value of the invention from an economic standpoint.

The references cited do not suggest the invention. They illustrate:

(a) systems whereby properly heated air may be forced into living rooms of buildings and into public vehicles, and allowed to escape through the ordinary cracks and openings or through openings especially provided for the purpose; and

(b) a small incubator in which there is an air circulating system in which a heater causes a difference in the specific gravity of the air in different portions of the system.

In the latter arrangement it will be noted the heat generated by the heater and by the eggs oppose and tend to prevent circulation with the result that during final stages of development when rapid circulation is most essential, the external heat must be reduced because the eggs are themselves generating heat and the circulation will be reduced to the minimum. In other words, with the system of the references the maintenance of uniform conditions would be impossible, where the number of eggs present is sufficient to have any influence on surrounding atmospheric conditions.

With regard to the Osborn patent, it will be noted that air stratification is the very object sought to be attained, see Osborn specification, page 1, lines 85-95 and 72-83; page 2, lines 8-17 and 36-38. There is no circulatory system but the air is discharged to the atmosphere, and this is also true of the car heater of the Hastings patent.

Respectfully,

MILO HASTINGS,

By Church & Church

His Attorneys.

December 30, 1913.

M.L.

Appeal No. 5565. U. S. PATENT OFFICE. March 11, 1913.

Before the Examiners-in-Chief, on Appeal.

Application of Milo Hastings for a patent for an improvement in Hatcheries for the Eggs of Domestic Fowl, filed May 3, 1911, Serial No. 624,865.

Messrs. Church & Church, attorneys for appellant.

This is an appeal from the action of the primary examiner finally rejecting the following claim:

"A hatchery for eggs embodying an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, whereby said eggs will be arranged in layers one above the other, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for forcing a uniform circulation of air through all parts of the chamber and past the heater, whereby convexion currents will be eliminated, temperature and gaseous stratification of the air in the chamber overcome, and the eggs subjected to the influence of air of the same temperature and composition."

The references cited are:

Hawkins, 725,079, Apr. 14, 1903.
Osborne, 886,325, Apr. 28, 1908.

The device covered by this claim is an incubator which differs from the incubator shown in the patent to Bay, cited by the examiner, in that a mechanically operated fan is employed for the purpose of securing ventilation of the incubator, instead of relying upon the natural circulation caused by the lamp which supplies the heat. By reason of the employment of a fan for this purpose, the appellant contends that he is able to carry on the incubation of eggs much more perfectly, especially

f/33

when conducted upon a large scale. It is contended that if the natural circulation of the air due to the lamp be relied upon, the air in the incubator will become stratified, by reason of the different temperatures of the eggs, and that as eggs absorb heat during the first portion of the process of incubation, and give out heat during the latter portion thereof, the additional heat at the end of the process will tend to check the draft at the precise time when it is most needed, while in the case of the forced draft the constant circulation of air at the proper temperature and humidity can be readily supplied at all times. The original specification is very brief and makes it clear that the sole invention is in securing better ventilation and a more uniform temperature throughout the hatching chamber, by substituting a forced draft for gravity drafts.

The examiner cites the patent to Osborne and the patent to Hawkins, for the purpose of showing that forced draft for ventilating purposes is well known in the art of ventilation, and in view of this holds that there can be no invention in substituting the forced draft for the natural draft of the lamp, for the purpose of securing more perfect ventilation in an incubator.

The appellant in his brief lays great stress upon his alleged success in building and carrying on hatcheries upon a large scale, and this may all be true, but there is nothing in the claim which involves operation upon a large scale, the claim covering nothing more than would be found in the Bay incubator if a fan were supplied to give better ventilation, and, even if the idea of carrying out the operations on a large scale could in some way be included in the claim, it would not appear to change the situation, for it is not novel to operate on a large scale as is admitted in the brief, reference being made to incubator establishments which have been operated in Egypt. Also, large numbers of eggs have been incubated at the same time

in this country, but in those cases it is stated to have been accomplished by means of a number of separate incubators.

We find nothing which indicates that the appellant has taken advantage of any newly discovered principle in the incubation of eggs; for it was well known that eggs should be supplied with air at the proper temperature and the proper degree of humidity, and that the ventilation should be made as perfect as was consistent with the means employed. In operating with incubators of moderate capacity, it is apparently not necessary to ventilate as perfectly as it would be if the eggs were incubated in a single large apartment, but this only means that when operating on a large scale a system of ventilation should be employed which will operate perfectly and be applicable to the increased size of the plant, and it is well known that even in the ventilation of buildings the proper device for this purpose is to ventilate by means of a forced draft. We therefore believe that the examiner is right in holding that there is no invention in substituting forced draft for the natural draft in an incubator.

The decision of the examiner is affirmed.

Frank E. Stevens

Jacquin Reynolds

Examiners-in-Chief.

I agree with appellant that the claim is patentable.

F. G. Stevens

Examiner-in-Chief.

Appeal No. 5585 Paper No. 16

Notice of Decision

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE
WASHINGTON

EXAMINER IN CHIEF
MAR 11 1903
U. S. PATENT OFFICE

Milo Hastings
c/o Church & Church, Attys.
McGill Bldg.
Washington, D.C.

Sir:

Inclosed find copy of decision this day rendered by the Examiners in Chief in the ex parte case of Milo Hastings — Serial No. 624,855.

By direction of the Commissioner:

Very respectfully,

W. F. Woolard,
Chief Clerk.

2-629

1911

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4.	Final Rec	July 18/11	29.
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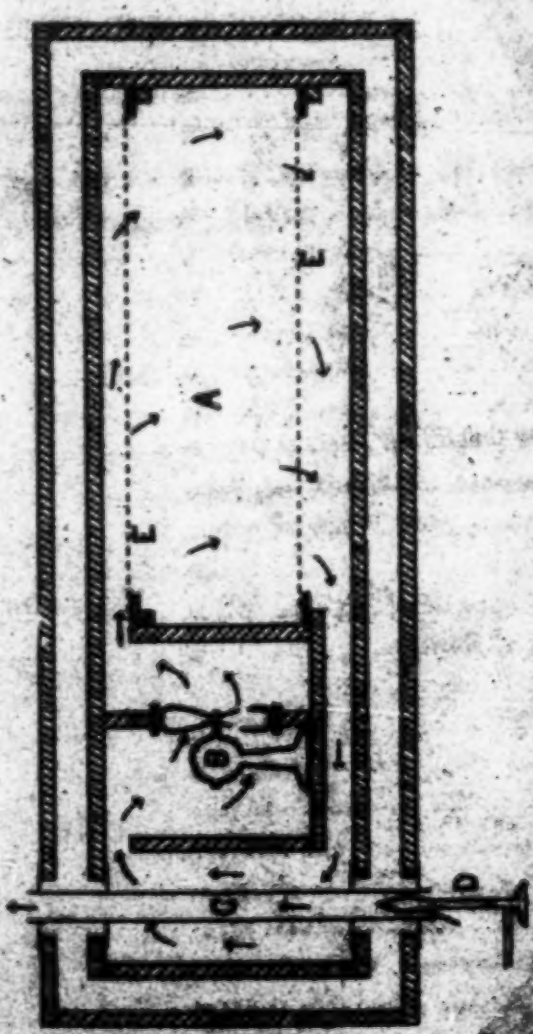

Fig. 11. B. Section.
E. C. B. Enlarged.